

POLAND  **The State Forests**

THE BIAŁOWIEŻA PRIMEVAL FOREST

Conflicts over its conservation and management

**Based on the materials of the
Białystok Regional Directorate
of the State Forests NFH by:**

Andrzej Szujecki



**THE STATE FORESTS
INFORMATION CENTRE**

Contents:

1. Europe's outstanding forest area.....	3
2. Management of the Białowieża Primeval Forest by the State Forests NFH	11
3. Nature conservation in the "Białowieża Primeval Forest" Promotional Forest Complex.....	17
4. Social functions of the "Białowieża Primeval Forest" Promotional Forest Complex.....	21
5. Should the Białowieża Primeval Forest all become a National Park?	25
6. What will be the future of the Białowieża Primeval Forest?.....	33

1. Europe's outstanding forest area

The Białowieża Primeval Forest currently occupies over 143,000 hectares, of which about 80,000 hectares are in the Republic of Belarus and over 63,000 hectares – in Poland (Fig. 1). 10,500 hectares of the Białowieża Primeval Forest in Poland are part of the Białowieża National Park, the rest of 52,600 hectares is under the administration of the State Forests National Forest Holding, an economic organization whose origins date back to the Decree of 31 December 1924 issued by the President of the Republic of Poland. The Białowieża Primeval Forest is managed by the State Forests NFH through three forest inspectorates (Hajnówka, Białowieża, Browsk) forming the “Primeval Forests of Białowieża” Promotional Forest Complex, currently named the “Białowieża Primeval Forest” Promotional Forest Complex (see the map on the inner back cover) established by Decision No. 23 of the Minister of the Environment, Natural Resources and Forestry on the 8th of November 1994, supplemented by Ordinance No. 30 of 12 December 1994 issued by the Director General of the State Forests NFH in accordance with the Polish Policy on Forest Resource Protection (Ministry of the Environment, Forest Resources and Forestry, Warszawa 1994).

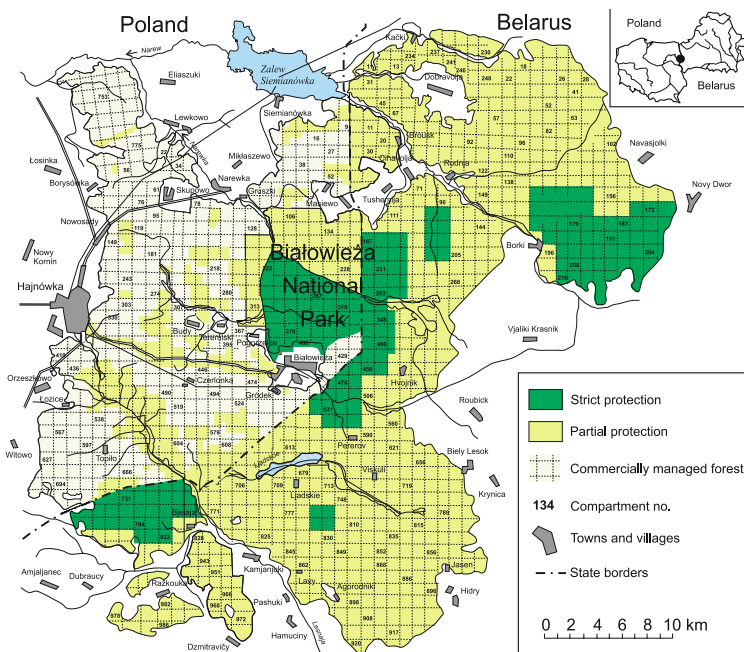


Fig. 1. Nature protection in the Polish and Belarusian part of the Białowieża Primeval Forest. Source: A. Sokołowski, „Lasy Puszczy Białowieskiej”. CILP 2004

General goals of the Promotional Forest Complex – a sustainable management model site with special nature protection tasks are defined in the Forest Act 1991, and in the amended version of 1997, while specific objectives are laid down particularly in:

- The Principles of Silviculture and Forest Protection in the Forest Ecosystems of the "Białowieża Primeval Forest" PFC, approved for official use by the Director of the Białystok Regional Directorate of the State Forests on the 19th of March 1997;
- The Forest Management Plan 2002–2011 for the Białowieża Primeval Forest's Forest Districts, approved by decision of the Environmental Minister (D.L. Ip-611-20JJ/2003 – for the Hajnówka Forest District, D.L. Ip-611-21JJ/2003 – for the Browsk Forest District, and D.L. Ip-611-22JJ/2003 – for the Białowieża Forest District) on the 10th of June 2006.

Forests of the "Białowieża Primeval Forest" Promotional Forest Complex are first of all commercially managed forests with a pronounced protective function (18,398 ha – 37.3%), whose objective is in line with the Forest Act (1991) and the State Policy on Forests (1997). This objective is to maintain the sustainability of forests and shape their multifunctionality; since 1975, and particularly since 1994, the productive (revenue-generating) function has been strongly reduced in favour of protective and social functions. The extraordinary tasks of the "Białowieża Primeval Forest" Promotional Forest Complex are manifested in the presence, within its territory, of nature reserves for a total area of 12,034.22 ha, as well as other forms of special functions of forests, where unlike in commercially managed forests the use of timber resources is limited (Table 1).



Fig. 2. Alder carr in the strict reserve of the Białowieża National Park

Table 1. The “Białowieża Primeval Forest” PFC area after the establishment of the “Natural Forests” Reserve (in ha)

Forest management unit, Forest District	Total	Nature reserves	Protective forests	Water-protecting forests	Forests of high nature's value	Forests for research purposes	Forests for seed production	Animal refuges	Defence-related forests	Forests within town limits	Ecological utility areas
Hajnówka	5 927.48	1 998.91	1 366.68	532.81	95.35	—	—	113.04	445.60	159.98	
Łesna	5 869.8	2 570.00	1 148.34	757.47	47.75	—	11.97	254.91	—	176.24	
Starzyňa	7 868.26	1 197.71	2 197.55	1 535.63	210.81	23.95	84.92	341.11	—	1.13	
Hajnówka	19 665.12	5 766.62	4 712.57	2 845.91	363.91	23.95	96.89	609.06	445.60	337.25	274.63
Białowieża	6 719.42	1 999.12	1 313.92	1 186.22	58.18	12.65	10.74	46.13	—	—	
Zwierzyniec	5 869.08	2 303.76	1 047.67	798.09	154.81	—	4.72	90.05	—	—	
Białowieża	12 588.50	4 302.88	2 361.59	1 994.31	212.99	12.65	15.46	136.18	—	—	53.45
Browek	6 969.02	1 208.04	1 686.50	1 418.90	232.09	—	6.01	29.50	—	—	
Łaźka Pustcza	7 091.57	81.96	2 063.91	1 676.37	—	—	5.11	382.43	—	—	
Narewka	6 325.06	674.17	1 265.42	1 011.19	174.81	—	2.78	76.64	—	—	
Browek	20 385.65	1 964.72	5 015.83	4 106.46	406.90	—	13.90	488.57	—	—	
TOTAL	52 639.27	12 034.22	12 089.99	8 936.68	973.80	36.60	126.25	1 233.81	445.60	337.25	336.74

The Białowieża Primeval Forest is undoubtedly the most nature's valuable area with the last, preserved natural fragments, lowland broadleaved and mixed forests which once stretched from the Atlantic Ocean to the Ural Mountains. The preserved stands of natural origin may serve as a model for those forests which have been damaged or transformed and need regeneration (Fig. 2). The local plant, microbial and animal communities still show all the characteristics of a virgin forest, and their refuge areas – a full range of species compositions. It is estimated that over 4500 plant species, about 3000 fungal species, and nearly 10,000 animal species have been preserved in the Białowieża Primeval Forest.

Such a large concentration of nature's values in the Białowieża Primeval Forest results from the following factors:

- By the turn of the 15th century, the Białowieża Primeval Forest together with the five other primeval forests (Świsłocka, Ładzka, Bielska, Błudowska and Kamieniecka) formed one huge forest complex;
- Particular interest of Lithuanian princesses, Polish kings and tsars in these rich hunting grounds had led to the establishment of special forms of their protection ensuring necessary conditions for successful hunting;
- The Białowieża Primeval Forest had and still has a rich mosaic of forest habitats (Fig. 3) enabling preservation of biocoenoses with a wealth of species, access to which has been difficult due to numerous boggy forests and peatbogs.

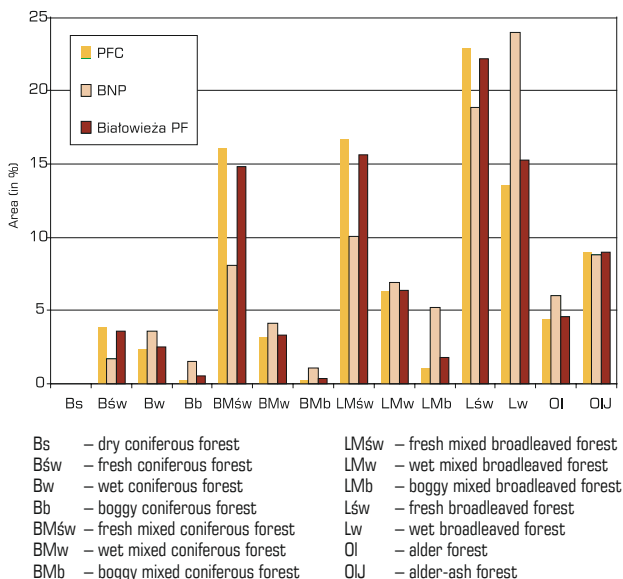


Fig. 3. Forest habitat type structure in Białowieża Primeval Forest as of 1 January 2002

Due to these circumstances, the Białowieża Primeval Forest avoided in the past drastic, large-scale felling and fragmentation, so harmful to nature, although organized harvest in the Białowieża Primeval Forest started already in the 15th century, when timber for ship construction was transported along rivers to Gdańsk. Charcoal and potash was burnt and exported, also juniper wood tar was produced. Bee-keeping was an important activity. The multiple uses of the Białowieża Primeval Forest were based on lease, particularly as a result of organized colonization continued till the end of the 18th century. Most colonized and utilized were mixed forests, situated on ablation uplands, featuring easier access, best-quality timber resources and other produce, as well as proper conditions for the development of agriculture.



Fig. 4. Spruce-pine forest in the “Berezowo” Reserve in the Hajnówka Forest District

With the collapse of the Polish-Lithuanian State at the end of the 18th century, it was the Tsar who decided about the targets and manner of management of the Białowieża Primeval Forest. It was the time of large-scale felling for the needs of the developing industries in Europe, particularly for the construction of the Russian fleet. The structure of forests underwent transformation, with preference given to pine and spruce. Gradually, the Białowieża Primeval Forest became the Tsar's property who, being interested in game hunting adventures, commissioned to increase the number of game deer, mainly red deer and elks. At the turn of the 19th century, these animals feeding, among others, on young tree fragments became so plentiful that they restrained forest regeneration. Today's lack of stands nearing 120 years of age is the result of that policy.



Fig. 5. Elk – an inhabitant of the Białowieża Primeval Forest

The World War II saw a devastating felling of trees in the Białowieża Primeval Forest by the German occupant. Roads and narrow-gauged railways were constructed (200 km), and the timber industry was developed in Hajnówka¹⁾. The results of these activities are well illustrated in Fig. 6 which shows age classes of the current forest stands. One can see that stands in the 4th age-class that is about 80 years-old, predominate. This is due to forest exploitation between 1924 and 1929 by the British company "The Century European Timber Corporation", which during that period harvested over 2 million cubic meters of timber; the abandoned clear-cut areas were naturally colonized by light-seed species. The contract concluded with this company for the need of quick money, was then broken by the government as a result of mounting criticism. However, the results of excessive exploitation are clearly visible today and decide to a large degree about the directions in contemporary management and administration in the Białowieża Primeval Forest. Stands composed primarily of birch and aspen, representing a pioneer forest succession stage, have developed from natural regenerations on 100-hectare cutting areas (Fig. 7). Of 8000 hectares of such stands, over 4000 hectares have been preserved. These are continuously replaced by plantations composed of main forest tree species typical for these habitats. The next disaster which hit the Białowieża Primeval Forest during the World War II took place between 1940 and 1941, when it was exploited by the Soviets.

¹⁾ After the World War II, the next 160 kilometers of the narrow-gauged track and numerous roads on embankments were constructed.



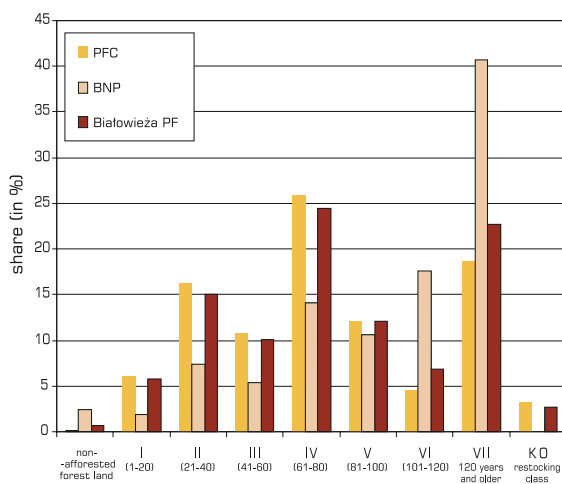


Fig. 6. Areal structure of age classes of stands in the Białowieża Primeval Forest. Status as of 1 January 2002



Fig. 7. Stands consisting mainly of birch and aspen established from natural regeneration on the cutting areas of the “Century” company



Fig. 8. Spruce forest, the Hajnówka Forest District

2. Management of the Białowieża Primeval Forest by the State Forests NFH

Administration of every forest complex and the method of its management should be in line with the current legislation system, comply with the State Policy on Forests and utilize the advancement of knowledge – the achievements in science and practice. These criteria have shaped the State Forests NFH's methods of management, which were reflected in subsequent 10-year Forest Management Plans for the Białowieża Primeval Forest's forest districts and relative ordinances of governmental bodies and the State Forests NFH management.

Like in the neighbouring countries, also in Poland between 1924 and 1991 a forest management model based on raw materials predominated. It was oriented on achieving the best economic results in timber production, harvest and sales. Timber harvest (volume of cut) regulation was based on the enlarged reproduction principle, which means that the allowable annual cut which nature can withstand should be lower than timber increment in stands in a given forest estate. This principle, in which determination of the target age of trees and stands to be felled played an important role, was accompanied by the urgent obligation to regenerate forest on a cutting area. This system was devised to ensure not only steady revenues, but their possible growth in the future.



Fig. 9. Commercially managed stands, the Browsk Forest District

During the interwar period, the good quality of robust stands in the Białowieża Primeval Forest and the substantial proportion of 120 + year-old-stands justified (from the point of view of a forest management model based on raw-materials) the high timber harvest which was set at 2.5 m³/ha in the Forest Management Plans 1931–1940. This however was below the average increment (2.25 m³/ha). It should be emphasized that this volume might have seemed rational at that time, but only with regard to forest exploitation by the “Century” corporation (3.5 m³/ha), and by the occupant during the World War I (10 m³/ha)²⁾. Due to both, the barbarian exploitation of the Białowieża Primeval Forest by foreigners and native forest administration, timber resources in the Białowieża Primeval Forest diminished from 372 m³/ha in 1916 to 189 m³/ha in 1948. Timber harvest in particular years was as follows:

- German occupant during the World War I ~ 5 million m³,
- Polish administration in 1918–1923 > 1 million m³,
- British firm “Century” in 1924–1929 ≈ 2 million m³,
- State Forests NFH in 1931–1939 ≈ 4 million m³,
- Soviet rule in 1939–1941 ≈ 1.5 million m³.

In such a situation, the State Forests NFH’s efforts in the Białowieża Primeval Forest (like in all Poland’s forests) were focused on the augmentation of stand resources, which ended with success, as the total volume of merchantable timber in the Białowieża Primeval Forest nearly doubled from 9,532,057 m³ in 1948 to 15,217,815 m³ in 2002 (Table 2).

The growth in total timber resources was due to regeneration and tending treatments, but first of all to the reduced timber harvest primarily as a result of the following decisions:

- 1) by the Minister of Forestry and Timber Industry of 30 January 1975, when under the pressure of foresters’ opinions, mainly by the Polish Forest Society, separate forest management rules were established for the Białowieża Primeval Forest. The notion of “non-productive functions of forests” was then for the first time introduced to the executive regulations, along with the obligation to preserve or restore the “primeval character of stands”, as well as not to exceed prescribed cuts and disturb water relations. By raising rotation age, prescribed cuts were reduced from 234,000 m³ to 196,000 m³ of net merchantable timber of main cut. Although progressive at that time, this decision did not undermine the existing forest management model³⁾,

2) During the World War II, harvest volume was 6 m³/ha.

3) The legal basis for the change from a forestry model based on raw materials to multifunctional forestry was provided not earlier than in the Forest Act 1991 which gave equal significance to the three main forest functions: environment-shaping, social and raw-material-providing (in this order). The transformation of the forestry based on raw-materials into multifunctional forestry awaited only executive solutions, which were provided, as a program, in the State Policy on Forests endorsed by the Government of the Republic of Poland in April 1997, and brought into practice in line with the relative ordinances of the Director General of the State Forest National Forest Holding. During that time the Forest Act was amended in the spirit of the changes taking place in the global policy after the Rio Conference (1992) pushing the world towards sustainable development. The amendment concerned provisions stating that: forest management shall be carried out with a view to ensure forest sustainability rather than the highest profitability, which was the practice earlier; nature conservation programs shall become an obligatory part of forest management plans for forest districts; the Director General of the State Forests NFH shall be authorised to establish promotional forest complexes as areas entrusted with special tasks as concerns implementation of multifunctional, sustainable forestry, where a forest ecosystem, not only a stand, becomes the main site.

Table 2. The status of the Białowieża forests according to successive forest management plan

Year	Total area (ha)	Forest area (ha)	Timber resource (m ³ of merchantable timber)	Stand volume (m ³ /ha of merchantable timber)	Average age (years)	Average increment (m ³ /ha/year of merchantable timber)
1948	52 749,77	50 423,44	9 532 057	189	75	2,52
1958	52 578,81	49 665,37	10 188 935	205	76	2,70
1968	52 962,83	49 906,53	11 344 408	227	72	3,15
1979	53 763,43	50 757,61	13 304 250	263	72	3,68
1992	56 517,70	54 195,41	14 183 547	262	73	3,67
2002	52 639,66	50 386,16	15 217 815	309	77	4,01
Białystok Regional Directorate of the State Forests				246	59	4,17
Poland				217	58	3,74

2) By the Minister of the Environment, Natural Resources and Forestry of 8 November 1994 on the protection and management of the Białowieża Primeval Forest. This decision helped develop, in accordance with the Polish Policy of Forest Resources Protection (1994), the concept of multifunctional forest and forestry contained in the Forest Act (1991), allowed for the implementation of the aforesaid "Principles of Silviculture and Protection of Forest Ecosystems of the "Białowieża Primeval Forest" PFC (1997);

3) By the Environmental Minister on the 10th of June 2003 approving the forest management plans 2002–2011 of the Białowieża Primeval Forest's forest districts based on the new principles respecting sustainable development and state ecological policy, with a special focus on the protection of nature's resources in the Białowieża Primeval Forest. Thus, the commercially managed forests obtained a status nonexistent in other forest districts of the State Forests NFM in Poland and in other countries. Its main characteristics are as follows:

- Abandonment of rotation age – a mathematical and real element of cutting regulation – in favour of silviculture and forest protection needs as the main criterion in making a cutting decision;
- Exclusion from any use of about one third of the Białowieża Primeval Forest's area (natural forests, refuge areas for protected animals, water-protecting forests along water courses, boggy habitats), and preserving, in the remaining fragments, part of the forests (5–20% of the area) free from any treatments to enable the continuity of ecological processes and to preserve and support the refuge areas of primeval forest organisms;
- Protection of 100 plus year-old trees, abandonment of their extraction for economic reasons except for trees colonized by bark beetles and trees in the stands cut by the "Century" company, subjected to conversion. The said exception concerns only the conversion of stands with spruce as a dominant species, damaged by the bark beetle, stands with the birch and aspen as a dominant species, and exposing the young

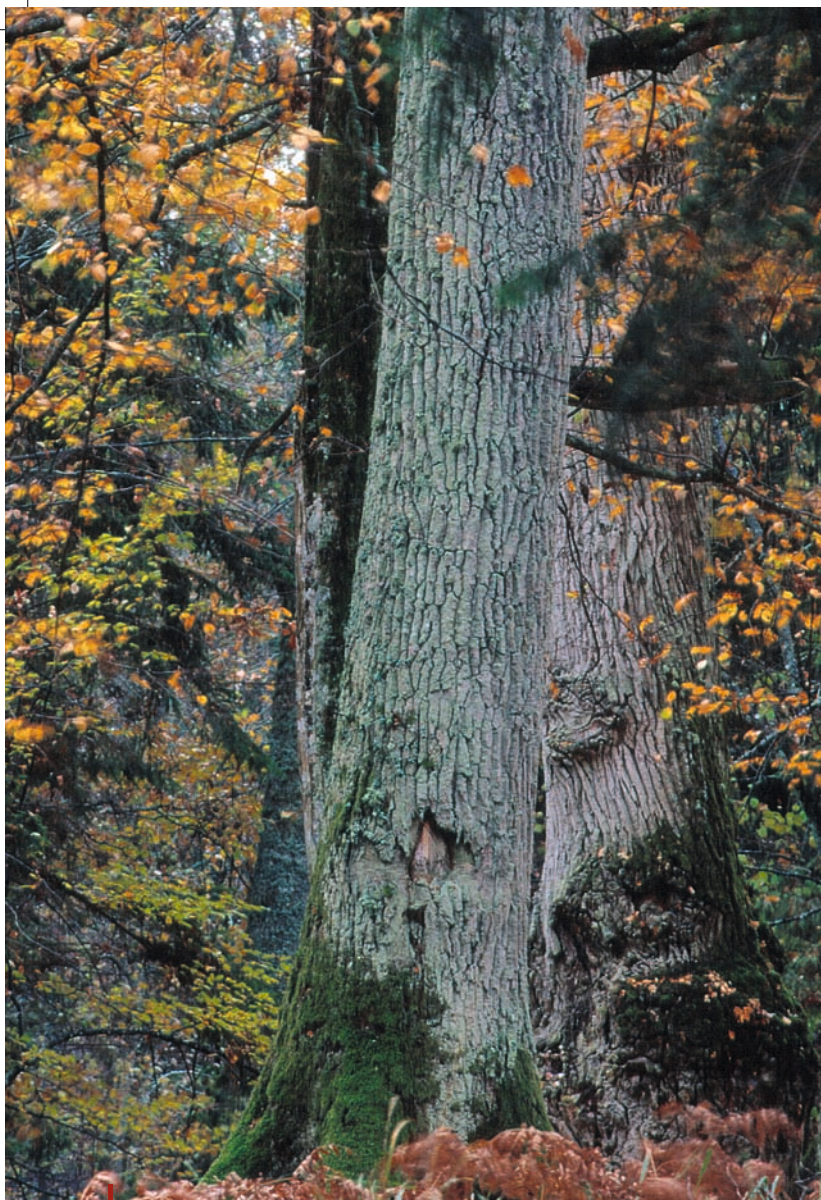


Fig. 10. The 100-plus year-old oak trees

generation in the framework of tending treatments, however with the exclusion of oaks, ashes, maples and elms from cutting. The volume of timber to be removed in the framework of tending treatments has been reduced to half the anticipated current increment of the stands planned for treatment. So defined utilisation, justified by the need for naturalization of forests and the restitution processes occurring in them



Fig. 11. Natural regeneration of spruce in the stands of the Białowieża Forest District

is high and amounts to 2.5–3 m³/ha/year, which is slightly more than the average, annual, per-hectare volume of timber harvested in the Białowieża Primeval Forest by the State Forests NFH before the World War II. It should be remembered that due to a significant growth of timber resources in stands in the Białowieża Primeval Forest, the aforesaid figure accounts only for 35–40% of current increment amounting to about 7 m³/ha/year, or 1% of average volume, which is half the volume in commercially managed forests in other forest districts;

- Restitution of natural forest communities on the basis of soil-habitat inventory results, preservation of all rare tree species in the Białowieża Primeval Forest (silver fir, bird cherry, crab apple, common pear, elm, rowan), giving preference to natural regenerations under shelterwood cutting system, abandonment of clear cuts or reduction of cuts to absolutely necessary, where there is no alternative solution.

To achieve the above targets, the 1st and 2nd special categories of forest management and three zones with a different protection degree have been established in the “Białowieża Primeval Forest” PFC in accordance with the Forest Act, relative to nature’s values. By fulfilling the novel protection tasks, forest management in the Białowieża Primeval Forest may become a model for the introduction of pro-ecological solutions in other forest areas administered by the State Forests NFH, at the same time fulfilling the functions of a promotional forest complex defined in the Forest Act.

The above decisions justify the statement that since 2002, the protection degree of commercially managed forests in the Białowieża Primeval Forest has been similar or even higher, both in assumptions and principles, than the protection degree of forests in national parks placed under partial protection.



Fig. 12. Bear's garlic (*Allium ursinum*)

3. Nature conservation in the "Białowieża Primeval Forest" PFC

In addition to the economic activities discussed in the previous chapter serving large-scale nature protection in accordance with the Forest Act, the State Forests NFH carries out conservation tasks resulting from the Nature Protection Act, covering with them different forms of nature protection in the "Białowieża Primeval Forest" PFC. These are:

- Nature reserves (21), occupying 22.9% of area of the PFC (Table 3);
- Ecological utility areas (83) totalling 375.76 hectares;
- Registered nature monuments: 1107 trees and 5 erratics;
- Nature monuments not yet registered (744);
- Species placed under species protection, including 93 plant and fungal species, as well as 371 animal species.

Table 3. Nature reserves in the "Białowieża Primeval Forest" PFC
(area in hectares after the changes introduced in Ordinances)

Item	Reserve name	Year of establ.	Area (ha)	Forest District	Changes
1.	Lipiny in the Białowieża Primeval Forest	1961	56,68	Hajnówka Forest District	
2.	Władysław Szafer Landscape	1966 1968	1 356,91	Białowieża and Hajnówka Forest Districts	Enlarged in 1968
3.	Pogorzelce	1974	7,63	Białowieża Forest District	
4.	Nieznanowo	1974	27,73	Hajnówka Forest District	
5.	Głuszc	1974	122,68	Browsk Forest District	Since 1996 in BNP
6.	Głęboki Kąt	1979	40,26	Hajnówka Forest District	
7.	Michnówka	1979	85,09	Hajnówka Forest District	
8.	Śitki	1979	35,29	Hajnówka Forest District	
9.	Starzyna	1979	369,45	Hajnówka Forest District	
10.	Szczekotowo	1979	36,92	Hajnówka Forest District	
11.	Wilczy Szlak	1979	48,69	Browsk Forest District	Since 1996 in BNP
12.	Wysokie Bagno	1979	78,92	Białowieża Forest District	
13.	Dębowy Grąd	1985	99,84	Hajnówka Forest District	
14.	Siemianówka	1995	224,54	Browsk Forest District	
15.	Dolina Waliczkowski	1995	47,43	Browsk Forest District	
16.	Gniłec	1995	37,21	Browsk Forest District	
17.	Podolany	1995	15,10	Białowieża Forest District	
18.	Olszyna Myśliszcz	1995	240,17	Hajnówka Forest District	
19.	Berezowo	1995	115,79	Hajnówka Forest District	
20.	Podcerkwa	1995	228,12	Hajnówka Forest District	
21.	Przewłoka	1995	78,61	Białowieża Forest District	
22.	Kozłowe Borki	1995	266,97	Białowieża Forest District	
23.	Natural Forests of the Białowieża Primeval Forest	2003	8 581,62	Białowieża, Browsk and Hajnówka Forest Districts	
Total			12 201,70		12 030,33 (after changes)



Fig. 13. In the “Nieznanowo” Reserve, the Hajnówka Forest District

The protection zone of the Białowieża National Park⁴⁾ (surrounding), under special protection regimes, covers 3,594.75 hectares of the Promotional Forest Complex. The entire Białowieża

⁴⁾ A separate reserve was established in 1921 on a part of the State Forests NFH's territory, later turned into a national park which in 1996 was enlarged to 10 517.27 hectares.



Primeval Forest (including the PFC) and its surrounding (total 78,538 ha) constitute a protected landscape area.

Large-scale nature conservation tasks are included in the Forest Management Plans under the name "Nature Conservation Program".

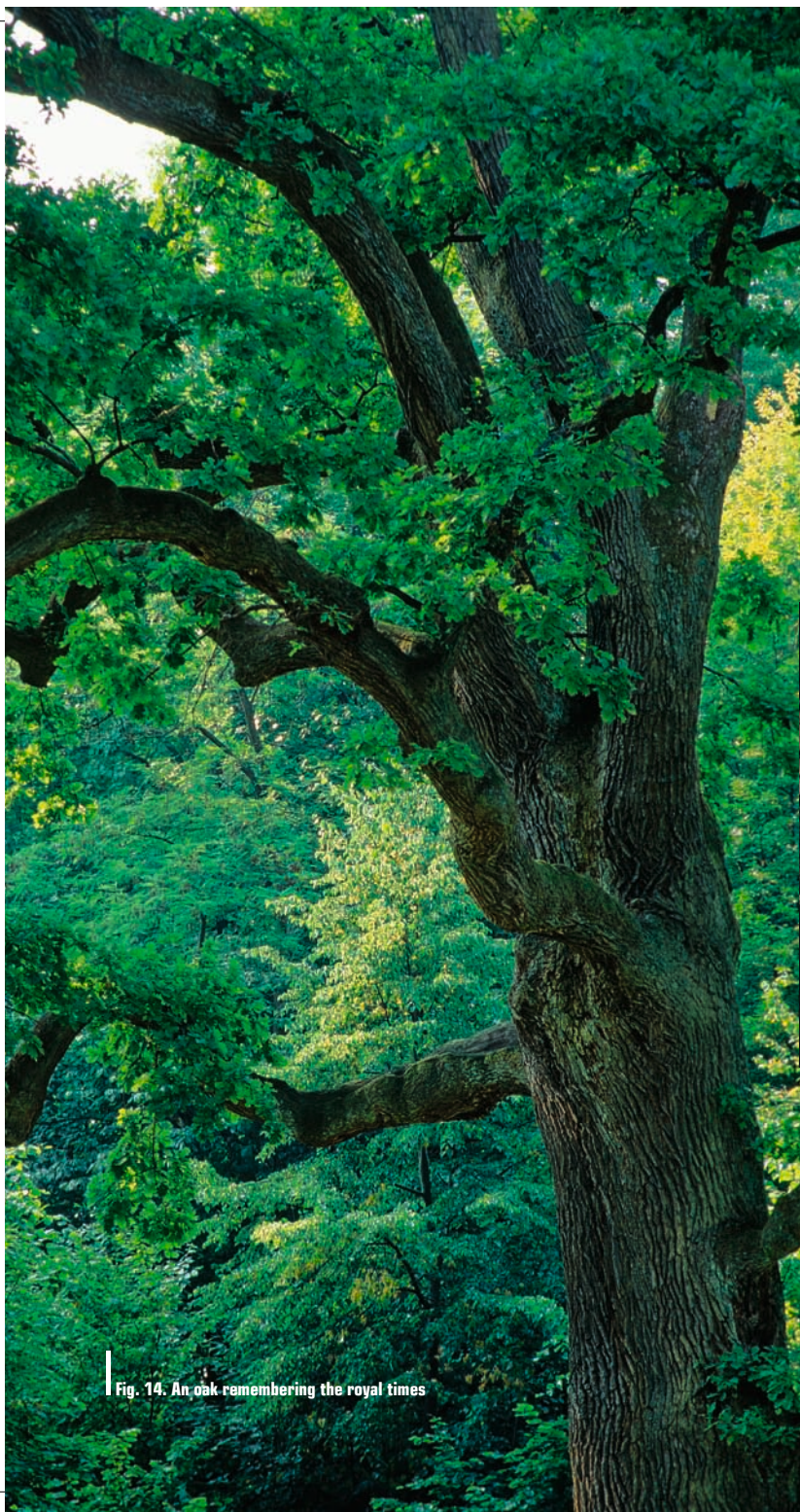


Fig. 14. An oak remembering the royal times

4. Social functions of the "Białowieża Primeval Forest" PFC

Like any forest, the Białowieża Primeval Forest has been fulfilling its defined functions throughout history till the present day. It means that it has been accommodating the material and spiritual needs of humans by offering them its goods. For centuries, it has been the supplier of timber for house construction, fuel and food, like honey, mushroom, berries, nuts, game meat or herbs important for local medicine, to its inhabitants and neighbours. Many products of the Białowieża Primeval Forest (timber, charcoal, potash, tar or juniper wood tar) were exported to many European countries already in the Medieval times. Russia built its ships also using the timber from the Białowieża Primeval Forest between 1820 and 1839. It should be remembered that about 1–2 thousand cubic meters of the best quality timber was required to build a ship.



Fig. 15. For centuries, the Białowieża Primeval Forest has been a supplier of fuelwood to local communities

The diversified uses of the forest have consolidated ties with the local people shaping the local culture, customs and the sense of co-ownership and responsibility for it.

The ties between community and forest were and are well known to forest district staff and managers, who often come from the same environment. The attitude of foresters protecting the Białowieża Primeval Forest's resources and at the same time understanding the community's needs helped them maintain authority,



Fig. 16. A field session of the Scientific-and-Social Council of the "Białowieża Primeval Forest" PFC

following the example set by the Royal Forest Guard in the 15th century. The implementation of multifunctional forestry sanctioned the community's participation in forest management, while the establishment of the "Białowieża Primeval Forest" PFC enabled appointing its Scientific-and-Social Council with a broad representation of local governments, interest groups, institutions, business organizations, and other bodies (Fig. 16). As a result of the discussions on the programs concerning the Białowieża Primeval Forest, integration processes take place facilitating dissemination of information on the pro-ecological targets of multifunctional forestry and methods of nature protection in a commercially managed forest. Education, particularly of the youth, is supported by the established nature and forest education centres, museums and educational paths. Foresters actively participate in local governments' meetings, attend press conferences, are present in the media sharing their knowledge on forest and related matters with representatives of other professions. In accordance with the Forest Act, forest management plans, likewise the spatial management plans of communes, are subject to



public evaluation. It should be noted that forest management plans commissioned by the State Forests NFH are drawn up by the Forest Management and Geodesy Bureau which, among others, sets the volume of timber to be harvested. Guidelines to the plans and their final shape are decided by the Technical-and-Economic Committee whose conclusions are binding to the Bureau's forest management planning units. The Committee members are mainly specialists – foresters and their meetings are attended by the invited representatives of other professions, institutions and communities. The same procedure was applied when drawing up the forest management plan 2002–2011 for the Białowieża Primeval Forest's forest districts. On behalf of the Minister, the preparation of the plan was supervised by the Chief Nature Conservationist. Such a broad consultation and control by the Chief Nature Conservationist was a guarantee of solutions that would serve nature conservation and satisfy the needs of local communities, representatives of science and politics. This plan was approved by the Environmental Minister on the 10th of June 2003 opening a new, socially approved chapter in the history of the Białowieża Primeval Forest.



Fig. 17. A hornbeam forest, the Hajnówka Forest District

5. Should the Białowieża Primeval Forest all become a National Park?

Ideas to enlarge the National Park in the Białowieża Primeval Forest have been voiced for a long time, however only the political transformations which took place after 1989 precipitated a series of demands to place the entire Białowieża Primeval Forest under the highest nature protection regime, rather than to enlarge the National Park's area. These demands were put forward under the democratic conditions and global consolidation of the green movements. Undoubtedly, the nature's values of the Białowieża Primeval Forest, its unquestioned position in the register of Europe's treasures seem to justify such a solution. However, in spite of this and the broad campaign conducted primarily by ecological movements in the country and abroad, as well as the opinions of renowned scientific bodies, such as the PAN Committee for Nature Conservation of the Polish Academy of Sciences, the State Council for Nature Conservation, scientific organizations headquartered in Białowieża, none of the governments of the last two decades has taken a decision to this end.

A positive step forward was the Ordinance of the Council of Ministers issued on the 16th of July 1996. It foresaw the doubling of the Park's area by adding to it the Hwoźna Forest Management Unit of the Browsk Forest District and part of the Białowieża Forest District with a view to establish a partial reserve there. Then, the territory of the "Białowieża Primeval Forest" PFC's reserves were to be doubled in 2003 by singling out fragments of natural forests under the name "Natural Forests" (see the map on the inner front cover). One may suspect that the main reason for not turning all of the Białowieża Primeval Forest into a national park was the lack of budgetary funds for this project, as well as the lack of support for this idea from the State Forests NFH and the local community.

The explanation is not easy.

The main argument for turning the entire Białowieża Primeval Forest into a national park, which appeared in many postulates and demands, as well as in the appeals mobilizing other green movements in Europe and North America to support the idea, was that forest management was destroying the Białowieża Primeval Forest which was disappearing as a result of it. Therefore, any activities resulting in the extraction of trees, particularly the old ones, should be stopped, and this should be guaranteed by a national park, not a profit-oriented business organization. Obviously, the management and engineering staff of the State Forests NFH could not, in view of the facts, agree with such an accusation, assuring that the Białowieża Primeval Forest was not disappearing but increasing its resources and that these postulates were not justified. At the same time, further decisions concerning forest protection were taken by the Director General of the State Forests NFH, including the five concerning protection of old



Fig. 18. A spruce forest, the Browsk Forest District

trees. None of the actions taken by the State Forests NFH was received without criticism from protest groups. On the contrary, every new initiative was met with mounting protests, particularly intensified with each change of the ruling party. It should be admitted that the hasty decisions taken locally, contrary to the official forest policy of the State Forests NFH, did not help. Particularly controversial, although in line with the valid forest management plan, was the felling of old oaks, e.g. after Decision No. 23 of the Minister of the Environment, Natural Resources and Forestry issued in 1994 when 2500 cubic meters of oak timber was harvested and sold.

One should realize that the accusation that the Białowieża Primeval Forest "is disappearing" may not necessarily mean the loss of trees and stands, but the progressing synantropization processes, that is denaturalization of biocoenoses following up multiple actions associated with human presence in the primeval forest, including forest management. Forest utilization through felling alone (for commercial purposes or in the framework of tending and stand protection treatments) does not bring disastrous consequences if it is carried out in a correct way, e.g. using a shelterwood cutting systems. Having for two hundred years developed cutting systems appropriate for given natural and economic conditions and their rational temporal and spatial distribution, forest management ensures forest sustainability replacing extracted trees with maturing trees. The "patchy" distri-



bution of cutting areas resembles “patchy” disturbances in primeval forests, caused by hurricanes, fires, pests, diseases and other factors of active destruction, following which those forests rebuilt their structure and functions in a secondary succession process.

The harmfulness of any cutting system, and of forest utilization in general, is in the lack of old trees, awaiting natural death, and of the dead organic matter of decaying standing and fallen trees being the habitats of many, frequently rare animal, fungal, microbial and even plant species. Finally, forest utilization and management cause secondary threats to the naturalness of biocoenoses, which is associated with the construction of forest, dirt and asphalt roads, narrow-gauged railways, bridges and embankments, timber storage organization, game management, forest nurseries and composting plants, settlements, rendering forests into arable land, meadows and pastures, protection of domestic animals, appearance of waste dumps, pollution of the environment with combustion gases, waste waters, etc. This human pressure on the environment is not exclusively the domain of forest management, though its impact range is the largest. Its nature is universal, as it is associated with any form of forest administration where settlement and forest penetration by humans is involved (gathering economy, tourism, recreation, etc.).



Fig. 19. On an educational trail, the Topiło Forest Sub-District

The primeval forest increasingly “disappears” with every human activity, when natural forces are replaced by human’s, when the forest becomes “temporally and spatially subordinated” and diversity is replaced by schematic uniformity, when biomass is removed from the forest to non-forest ecosystems and the primeval forest’s wildlife is disturbed!

Each of the above mentioned anthropogenic stress factors has its impact and spatial occurrence range. The nature and forest inventory has enabled to define the level of degradation of the Białowieża Primeval Forest’s ecosystems thus enabling diversification of protection treatments and other economic tasks of multifunctional management in line with the protection targets laid down in the valid forest management plans. Restraining the loss of the Białowieża Primeval Forest’s natural resources and initiation of the natural processes supported by forest management becomes currently the main management goal of the Białowieża Primeval Forest. One can argue whether the current extent of forest management’s interference into the Białowieża Primeval Forest’s wildlife complies with the aforesaid goal, or whether it is too drastic, or should not take place at all, and the State Forests NFH should be replaced by a national park. In each case, accusing the current forest management carried out in the Białowieża Primeval Forest of bringing destruction to its wildlife is not only groundless, but offending.

Foresters’ opponents should recognize the partnership of the State Forests NFH in nature conservation in the Białowieża Primeval Forest and the justified differences of opinions on the methods of attaining forest protection goals. The difference of concepts pertain to the question of how to reduce the population of



Fig. 20. Spruce – a victim of the eight-toothed bark beetle

eight-toothed bark beetle, whose recurring mass outbreaks after the dry years and hot growing seasons limit the proportion of spruce in the Białowieża Primeval Forest's stands (Fig. 20). The main and proven method of control of this insects applied in different countries is the extraction of so called decaying trees colonized by bark beetles, whose needles are still green, debarking or immediate transportation from the forest. As old spruce trees are most sensitive to draughts and easy to weaken and decline, the bulk of removed decaying trees is large. Therefore, one can get the impression that the forest is largely exploited ⁵⁾.

⁵⁾ During the outbreak of the bark beetle in the Białowieża Primeval Forest in 1922, 220,000 trap trees were distributed and 25,000 dying spruce trees were cut in 1953 for the same reason.



Fig. 21. Dead spruce area in the Białowieża National Park

Part of the ecologists maintain that the application of this method is useless as it gives an occasion for increased felling, and that it would be better to leave the control of the bark beetle to nature⁶⁾. They refer to the fact that both the spruce and eight-toothed bark beetle, have coexisted for millions of years inhabiting the same large natural ranges, and that the spruce has survived in spite of that. Nobody denies that nature activates its regulatory mechanisms when the population of the controlled organism exceeds the average population size. However, one should take into consideration that processes developing beyond human control have not 'a priori' set spatial and temporal boundaries. In primeval forests, whose remains can still be found in boreal Syberia and North America, the organism population change processes have occurred on thousands of hectares for many years, but the succession processes taking place in the dead stands have never created an economic or social problem.

A question arises: may the administrators responsible for the condition of our forests, and the Białowieża Primeval Forest in particular, only observe a decline of spruce stands or single spruce trees in mixed forests and, instead of robust stands, offer our society a view of pioneer forest succession stages – birch and aspen thickets on

⁶⁾ A.S. Pullin: *Biologiczne podstawy ochrony przyrody*, Wydawnictwo Naukowe PWN, Warszawa 2004.



large areas? One can see this happening in the Białowieża National Park, where whole areas of dead spruce trees can be found (Fig. 21), as well as in the Belarusian part of the Białowieża Primeval Forest where no steps have been taken to control the bark beetle and today the losses amount to a million cubic meters of timber. Similar trust in nature's regulatory mechanisms has eliminated 3000 hectares of spruce forests also from the Wigry National Park. There are other examples too. Communities do not tolerate damage to forests like that which has occurred many times since the beginning of the 16th century and is documented in literature. For example, the 2.7 million cubic meters of spruce attacked by the bark beetle was cut and 3 million trap trees were distributed in the "Czech Forest" between 1869 and 1875; the 2.5 million cubic meters of dead spruce in the Harz Mountains were cut between 1880 and 1883, etc. We are aware of nature's regulatory forces and are eager to use them, however in extreme situations, which are frequently the consequences of human errors, we should make an extra effort.

The difference of opinions on the management of areas particularly valuable to nature is, in fact, between passive protection (strict reserves) and active protection (partial reserves where human intervention is allowed). Since 2002, the entire Białowieża Primeval Forest has become a huge reserve with both forms of protection; opinions suited for a forest management model based on raw materials should not be applied in this case.

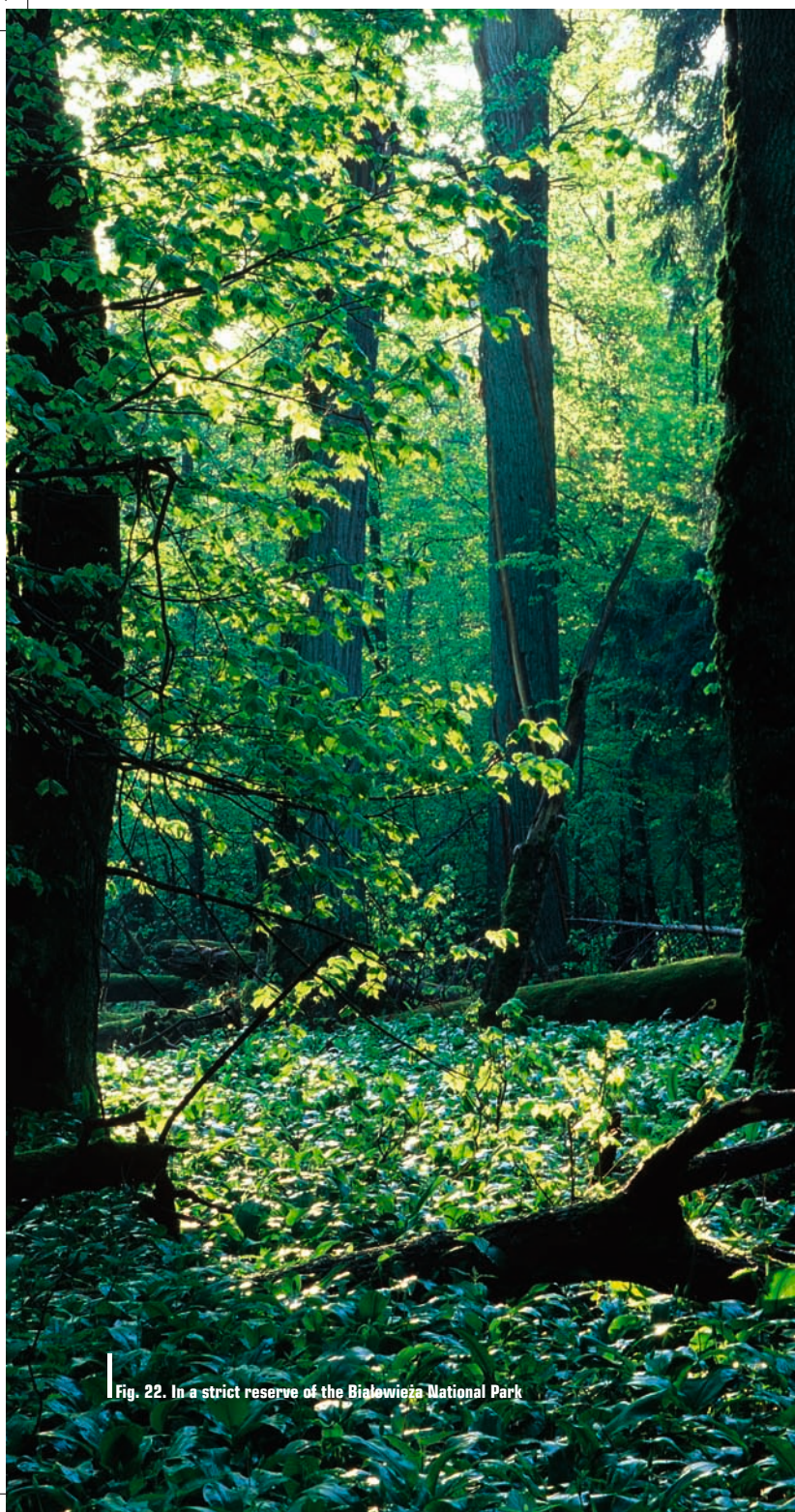


Fig. 22. In a strict reserve of the Białowieża National Park

6. What will be the future of the Białowieża Primeval Forest?

Whether the current status will be preserved, or whether the National Park will cover all the territory of the Białowieża Primeval Forest depends on the decisions of the highest state authorities. There are differences of opinions on this issue. However, the line does not run between foresters and biologists, or between them and the local community. The disagreement concerns rather the proper method of preserving this Promotional Forest Complex as a model of nature for the benefit of people and humanity, and as a place where cohabitation of the forest and the community has historical foundations. It is worth remembering, that eighty per cent of directors of national parks in Poland are graduates of forestry departments. Also, foresters with degrees in forestry and with practical knowledge of the primeval forest, have developed the first, concrete project aimed to turn the entire Białowieża Primeval Forest into a national park. Moreover, foresters have been chairmen or members of the State Council for Nature Conservation. We should not forget, that men of high authority in biological sciences sit on the Scientific-and-Social Council of the "Białowieża Primeval Forest" PFC and their scientific output is practically applied in forest management. Also, local governments' representatives who support solutions beneficial to the communities they represent are members of the said councils, as well as delegates of ecological movements whose emo-



Fig. 23. The "Olszynka Myśliszcze" Reserve, the Hajnówka Forest District

tional involvement in the protection of nature's laws should not obstruct but help to shape the policy on the Białowieża Primeval Forest and perform a useful control function.

A press conference of the Ministry of the Environment took place in 2002 at which information was released on a draft act whose aim was to integrate the management of the Białowieża Primeval Forest through a common economic-protective program with local communes under the name "The Białowieża Primeval Forest – a National Forest". Foresters recall this fact in support of the integration of action plans for the entire Białowieża Primeval Forest, with the current administrators being retained. Administration of part of the Białowieża Primeval Forest by the State Forests NFH should not only ennoble the forester profession, but also spread good, pro-ecological solutions across the country aimed at setting directions for research and forest education programs of scientific and academic institutions, management of commercially managed forests at any organization level, as well as improvement of nature conservation programs and their implementation by forest districts.

It should be taken into consideration that the State Policy on Forests foresees preservation and development of multifunctionality in all forests administered by the State Forests NFH, and prohibits the singling out of forests performing only one function. The few deviations from this rule, like the Białowieża Primeval Forest PFC, where the nature conservation function predominates, do not undermine this general principle which guarantees correct, creative development of modern forestry. In spirit of the Forest Act and the State Policy on Forests, every effort should be made to ensure that the forester profession is that of a manager of forest ecosystems rather than a forest planter and timber producer. This is of a paramount significance for the preservation of natural forest resources in entire Poland.



