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KAMPINOS NATIONAL PARK



Active protection of bats and the renaturalisation of dry grassland habitats in the northern part of Łuzowa Góra,
Kampinos National Park[™] No. PO15.02.04.00-00-0017/16



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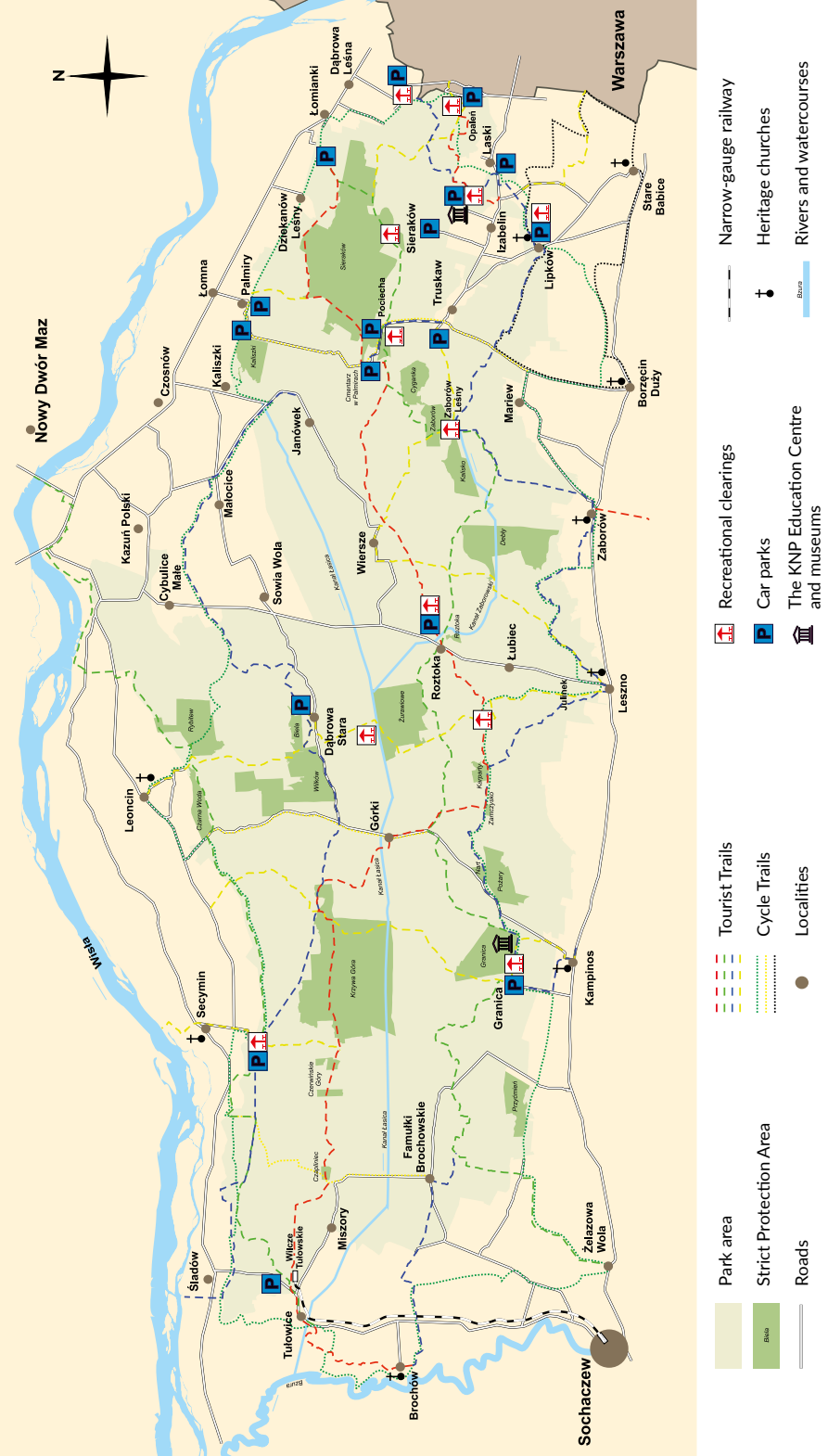
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*Scattered across extensive
 flat areas are powerful chains of dunes.
 We have here one of Europe's
 greatest dunelands.
 Jan Samsonowicz, 1922*



KAMPINOS NATIONAL PARK





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KAMPINOS NATIONAL PARK



MAZOWSZE'S TREASURE

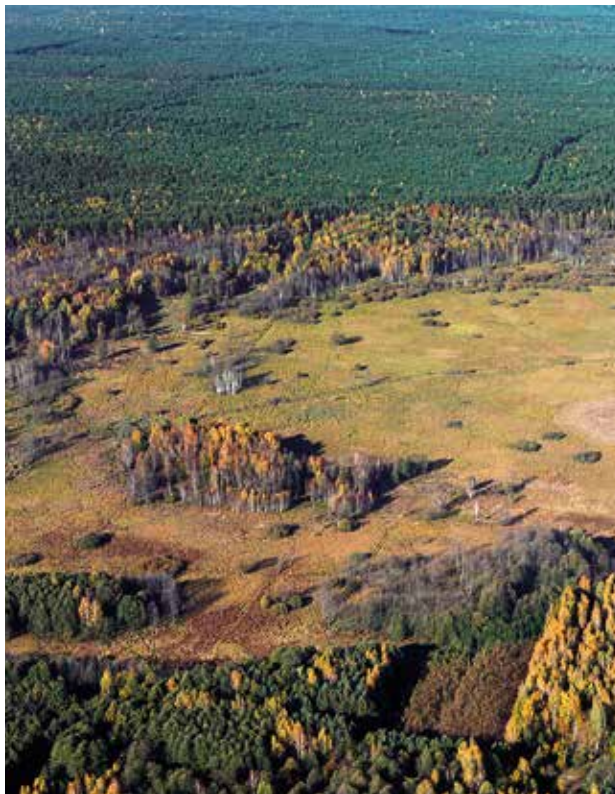
Though ostensibly featuring a rather monotonous landscape of plains, Poland's Mazowsze region actually has a treasure to offer naturalists, historians, ethnographers and tourists of all kinds. This is Kampinos National Park (KNP), which was founded in 1959 in Poland's heartland, and in the channel today hosting the River Vistula but once carrying vast amounts of water away from melting ice sheets. In the west, KNP almost reaches the Bzura's confluence with the Vistula, while to the Park's immediate east there is Warsaw. This is then a large National Park (in fact the country's second largest, at 385.44 km²), and the only one in Mazowsze. The inland dunes interspersed with marshes it protects are unique in Europe, so valuable natural features are appreciated internationally, as well as in Poland. KNP became a UNESCO Biosphere Reserve in 2000, and has been a *Natura 2000* refuge since 2004. Its buffer zone extends over a further 377.6 km².

Within the KNP borders we find a large complex of wild forest known as Puszcza Kampinoska. This was occupied in

prehistoric times, as the dunes surrounded by marshes offered a defensible retreat from invaders. The name Zamczysko here hints at a past status of one area as a stockaded settlement going back to the 13th century; and chroniclers tell us that these were lands ruled by the Dukes of Mazovia. This led to a status as Crown Land from 1476 on, with the forest here becoming a Royal Estate (generating revenue for the Treasury) from 1590. Settlers from the mid-18th century onwards engaged in logging and charcoal-making, and their forest hamlets made a start to villages known today as Buda Zaborowska, Cisowe, Dąbrowa, Górki and Kiścinnie. Also arriving in the 18th century were the so-called *Olendrzy* – suggesting the Dutch, but these were mainly Germans. Either way, they were expert at managing flood-prone areas, and their techniques included the planting (and later pollarding) of the willows on earth embankments now considered so characteristic of this region today. Jewish settlers appeared in the mid-19th century, and it was in 1904 at Leoncin on the northern margins



It is now less and less common to see old farmsteads in Kampinos Forest. While almost 16,500 people lived in the Park area through to the mid 1960s, a KNP action to increase protection through the voluntary purchase of land in private hands has ensured a decline in the number of inhabitants to around 2000.





▲ The “Insurgents’ Pine” in Górkki is now a dead, partly-fallen tree with downward-sloping residual boughs. It is here that surviving rebel participants of the 1863 January Uprising Battle of Buda Zaborowska are said to have been hanged.



of the Forest that future Noble Prizewinner Izaak Bashevis Singer was born.

A location close to the Polish capital ensured that the *Puszcza* bore witness to many key events in the history of Poland. It was through the western part of this Forest that Władysław Jagiełło passed on his way to fight at the Battle of Grunwald. The King and his army crossed the Vistula at Czerwińsk, using a kind of early version of a pontoon bridge. General Henryk Dąbrowski brought his army to the northern edge of the Forest in 1794, during the Kościuszko Rising. A battle with the Prussians was fought then, in the Kamion and Brochów area. The *Puszcza* also afforded protection to insurgents in Poland’s “January Uprising” (starting in 1863), while young people from Warsaw about to be drafted to the Tsar’s Army took refuge. General (in the same action) and Military Commander of Płock Province Zygmunt Padlewski set up his HQ in a manor house at Kampinos, while it was on April 14th 1863 that the “Children of Warsaw” detachment did battle with the forces of the Tsar near Buda Zaborowska.

It was nevertheless World War II that made the biggest mark on this Forest. One of the largest engagements of Poland’s September Campaign against the invader took place here, becoming known as the Battle of the Bzura. In that same month, and through to July 1941, the Palmiry area was used by Hitler’s forces to murder detainees brought from the Pawiak and other Warsaw prisons. These pine forests thus witnessed the deaths of more than 1700 inhabitants of Warsaw, who included leading politicians and public figures, scientists and thinkers, sportspeople and artists. To be mentioned as just a few of many famous cases were those of Parliament Speaker and leading people’s movement activist Maciej Rataj; Vice-President of the City of Warsaw Jan Poleski, Olympian Janusz Kusociński and the Blessed Father Zygmunt Sajna. The Cemetery and Mausoleum complex built at Palmiry after the War is in fact the last resting place of 2115 who were murdered in this way in Kampinos Forest and other forest areas close to Warsaw.

The Park and its buffer zone have many important items of architectural and cultural heritage, of which key ones link



◀ The Fryderyk Chopin Birthplace Museum came into being in 1931. The manor house is surrounded by heritage parkland adjacent to the River Utrata. Individual visits with an audioguide are the norm here, and both the house and its surroundings are filled with the composer’s subtle music.

up with the life of composer Fryderyk Chopin – at the manor house in Żelazowa Wola (his birthplace), and the Gothic-Renaissance-style fortified church in Brochów (where his parents were married and he was baptised). Interesting buildings fixed forever in Polish literature are located on the north-eastern edge of the Forest, at Lipków. These are a late 18th-century Neo-Classical church and manor house, the latter owned from 1880 on by the Szetkiewicz family, whose daughter married Henryk Sienkiewicz. It was therefore here that the writer set his duelling scene in “With Fire and Sword”, involving Wołodyjowski and Bohun. Other old churches worth seeing are at Borzęcin, Stare Babice, Zaborów, Leszno and Łomna. Laski on the eastern margins of the Forest is famous throughout the country for its centre raising and teaching and visually impaired children. This was founded by Róża Czacka, herself blind, who founded an Order of Nuns specifically to care for the blind. Further testaments to the past that also celebrate folk art and culture are roadside crosses and shrines (not least the cross more than a century old located in Wiersze).



▶ Located on the crest of a dune, a mass grave a few hundred metres from Zaborów Leśny is the last resting place for 78 insurgents of the “Children of Warsaw” formation led by Maj. Walery Remiszewski. This was defeated by the Tsar’s army at the Battle of Buda Zaborowska of April 14th 1863.



Today's landscape of Kampinos Forest is first and foremost one of dunes and marshes. But this area took its basic shape over 20,000 years ago, during the last Ice Age. Then the Scandinavian Ice Sheet extended all the way to Poland, though reaching its ultimate limits perhaps 50 km north of today's Puszcza. A massive meltwater river that was the ancestor of today's Vistula was often dammed by the ice, creating a lakeland on whose floors fertile alluvium was deposited. But when melting intensified, this proto-Vistula fed from the south and east of what is today Poland flowed along the ice margins to the North Sea, forming the so-called Warsaw–Berlin Proglacial Valley (*Urstromtal*) more than 10 km wide. Vast amounts of sand and gravel were dumped in our area in the process.

Once the ice sheet retreated, the Vistula changed its course once more, heading for the Baltic, and assuming a width similar to today's. Climate change induced a shift of the channel, with areas of deposited sediments now being cut into. Around 12,000 years ago, the wind began to reshape dried-out river



terraces, forming complexes of parabolic dunes whose fronts face east, while their arms stretch out to the west and north-west. Further wind action ensured that southern arms of dunes linked up with one another, forming sandy banks several kilometres in length. After some time, vegetation began to colonise the dunes, curbing the aeolian processes and tending to fix the shapes. Today's tallest dunes are elevated 28 m above their surroundings. Around 10,000 years ago, the Vistula finally

▲ As recently as in the 1920s, it was still common to note bare dunes with only very limited vegetation. As this often reflected over-exploitative forestry, dunes today have regained their pine forests, mostly also with diverse layers of undergrowth and ground cover.





◀▼ The main watercourse is the Łasica Canal, about 35 km long, with a basin covering more than 500 km². During spring melts and prolonged summer rain, its channel floods out on to the fields and meadows and creates a landscape rather like the one present before drainage was carried out.

A peatland is a permanently-wet area, overgrown with plants whose dying remains transform into peat. The three types of peatland are fens, transitional peatlands and raised bogs – which differ in terms of origin and water supply, as well as the type of plant cover supported.

continued on a large scale – even through to the 1970s, with a whole drainage network taking shape around the Łasica, Zaborowski, Kromnowski, Olszowiecki and Ł-9 channels and regulated watercourses. The resultant lowering of the water table was responsible for many unfavourable changes to Park ecosystems. Today, efforts to reverse that revolve around slowing flows and making habitats wetter. Dam-building beavers do a great deal to help this process along.

► Translatable as “the Long Marsh”, Długie Bagno is in fact KNP’s only raised bog, though here it has not taken on the dome shape so typical of this kind of peatland (probably on account of drying-out that intensified in the 1920s with peat extraction). A habitat of this kind is fed only by rain, and the water level varies depending on whether periods are wet or dry. Clearly at one point things were dry enough for long enough to allow birch and (to a lesser extent) pine to encroach, but now the area must be receiving more precipitation, as the trees grow little, or are even dying off.

shifted to more or less its present location, while abandoned channels began to develop into fenland. The major result was for two parallel belts of marshland to take shape, as separated by two belts of dunes. However, among the marshes there are also occasional dry and sandy mounds, while the hollows between dunes are wet areas in which peat begins to form.

From the mid-19th century onwards, efforts began to drain the Puszcza to meet the needs of agriculture. Work



◀ Długie Bagno took shape in the period not long after the Ice Age, and a relict species from that time called leatherleaf ▲ can still be found here. Other species present include several kinds of Sphagnum bog-moss, haretail cotton-grass, cranberry, bog-rosemary and bog-bilberry.



PLANTS, FUNGI, LICHENS

The rich mosaic of habitats from the very wet through to the very dry ensures considerable diversity of plant cover. The 150 plant communities present represent a third of all those described for Poland. The Kampinos Forest has more than 1400 species of vascular plant, plus almost 150 types of bryophyte. Fungi are represented by over 1500 taxa, with 200 of these collaborating with fungi to make lichens. Rare and protected species include beard lichens. Over 40% of the diverse group of organisms that fungi represent are associated with old decaying trees or dead wood. Some are even known from KNP alone. The dune areas are also important on the national scale for the psammophilic (sandy-habitat) vegetation they support, and there are protected species here too, like the fungi *Scleroderma septentrionale* and the daisy earthstar. Further interesting fungi include hen-of-the-woods, and the cauliflower and beefsteak fungi!

A lowland location in central Poland ensures that species met with here include dwarf everlast (associated with

a Continental climate) and grey hair-grass (Atlantic), but also twinflower (whose range is boreal) and rose-flowered salisfy (described as "Pontic" - indicating the direction of the Black Sea). Leatherleaf is a postglacial relict species present at only 8 other sites in Poland, while the "dark birch" is a form of the silver birch that lacks the white triterpene pigment known as betulin.



◀ A characteristic plant overgrowing sunny places and dry dune habitats is grey hair-grass. It is adapted to life in conditions of drought, with its well-developed roots. Its rough, grey-green and rather stiff leaves form round clumps.



Forest accounts for about 73% of the area of the National Park, and the trees occurring here most commonly are Scots pine, black alder, birches (silver and downy), and oaks (pedunculate and sessile). Most of the dune area is occupied by stands of pine or pine+oak. Pines growing to 30 metres in height and with girths of over half a metre have survived in the Nart, Wilków, Rybitew, Sieraków and Kaliszki Strict Protection Areas.





◀ The early-spring-flowering lungwort starts off looking pink. But its flowers darken to a violet colour once it has been pollinated by some kind of hymenopteran (honeybees included)

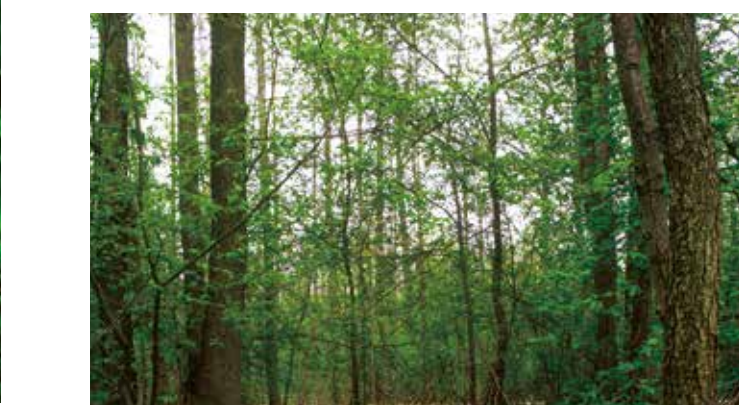


▶ A plant of particularly recognisable habit, the martagon lily proved a particularly popular motif in folk art of various kinds. Associations are with royal majesty on the one hand, and Christian purity and innocence on the other; though magical powers have also long been ascribed to this species.



Areas at the base of dunes, some of their slopes, and sandy islets, support the typical broadleaved forest of Eastern Europe, with pedunculate oak, hornbeam and small-leaved lime. This forest is at its most beautiful in spring, when the floor is a carpet of flowers all growing and blooming quickly, before the developing leaves of trees close the canopy. Species include wood anemone and yellow anemone, hepatica, bugle, greater stitchwort, yellow archangel and others. Where this habitat

▲ Yellow archangel is a good honey-making flower, but its pollination requires a long-tongued type of honeybee, given the length of the trumpet flower. Smaller kinds of bee can go inside, and do take both nectar and pollen. But they do not constitute pollinators of this species, whose seeds are ant-dispersed.



◀ Before leaves appear on trees and close the canopy, the forest floor is carpeted with the flowers of the so-called "geophytes". These many species have adapted to dramatically-changing light levels present through the course of the season in broadleaved forest. They make the most of the sun's rays in early spring, but then survive the later part of the year (for a period of some months) in dormant tubers, corms and bulbs in the soil, storing all the energy and nutrients they need to begin growth rapidly once spring returns. Shown here is a spectacular display of wood anemones in oak-lime-hornbeam forest.



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◀ The small and delicate woodland plant known as wood sorrel is edible, and a rich source of both oxalic acid and vitamin C. The shape of the leaves (which fall later on) sometimes results in confusion with clover. When ripe, the seeds can be thrown some distance as the capsule bursts.

comes under anthropressure, the forest that grows here is a sunlit kind of oak woodland.

The forest community of marshland areas is formed from alder trees, and has its characteristic spatial structure. The trees themselves are surrounded by tall vegetated hummocks, but between these are hollows filled with water for much of the year. While the hummocks have shrubs, mosses and ferns, as well as cowberry and wood sorrel, the hollows support various sedges, yellow flag iris, milk-parsley and marsh marigold. Being almost completely inaccessible, the alder forests are the best-preserved forest communities anywhere in Kampinos National Park, and also a key refuge for many rare species of animal.

Riparian alder-ash forest is present along watercourses (as the name suggests), but also on the margins of pure stands of alder. Originally, such forests grew in most marshy areas, with the only open habitats here being swamps featuring either reeds or sedges. However, human activity led to the appearance on drained marshland of semi-natural meadow commu-



► The most-valuable alder-forest habitat in Puszcze Kampinowska gains protection in the Sieraków, Krzywa Góra, Żurawiowe, Czarna Woda, Rybitew and Debły Strict Protection Areas.



◀ One of the National Park's largest heathlands has developed on the 1988 fire-site.



nities whose many rare species include orchids, fringed pink and Siberian iris.

The Grochalskie Piachy sands form Kampinos National Park's largest complex of open inland dunes. Elsewhere un-vegetated sand is now a rather rare habitat, covering only small areas. Sparse grassland with grey hair-grass and thermophilous grassland vegetation is more widespread, as is heathland.



► Heathland develops where forest has been removed by fire or the wind. Its status is therefore that of a transitional habitat, whose retention requires ongoing protective measures (i.e. the cutting out of encroaching tall shrubs, as well as pines and birches).



Along with its buffer zone, the Park is one of the Polish Lowland's key refuges. The diversity of habitat here is sufficient to ensure that around 50% of Poland's entire fauna is likely to be present – some 16,500 species! The fact that only just over 5000 of these have been shown to occur so far only emphasises how rather little is known about this area's animals. 250 species that have been recorded are protected, while 15 were new to science, and 25 noted for the first time anywhere in Poland!

The animals achieving greatest abundance here are of course invertebrates. These include insects, some of which are relict species still present because the forests retain certain primaeval features. Insects associated in this way with well-preserved forests include hermit and emerald scarab beetles, plus *Cucujus cinnaberinus*. Most of these have Polish ranges encompassing just a couple of sites. While tundra species hanging on from the Ice Age also occur here, there are – paradoxically – a number of southern species that take



◀ *Cucujus cinnaberinus* is regarded as a relict species of primaeval-type forests, and is associated with dying or dead trees, mostly broadleaved. The larvae of this beetle hide out beneath the bark, as do the adults, which tend to come out on to the trunk at night, in order to find a mate or lay eggs.



◀▲ As predatory animals, amphibians eat insects first and foremost. There are still forests in which they remain so abundant that they clear the habitat of more insects and other invertebrates than birds do. That also means mosquitoes, whose larvae are aquatic.



Common and moor frogs are mostly darker-spotted amphibians within the group of so-called "brown frogs", though moor frogs turn blue in spring!

advantage of the sandy south-facing dune habitats. One example of this kind is the beautiful jumping spider.

All of the species of amphibian inhabiting the Polish Lowland are found in this area (no fewer than 13 species), and specialities are the fire-bellied, green and natterjack toads. Where reptiles are concerned, there are sand lizards, viviparous lizards and slow worms, as well as grass snakes, smooth snakes and adders.



▶ The adder is typically a grey-brown or copper-coloured snake with a black zigzag pattern along its back. Males have more-contrasting colours, while females are better camouflaged. Black adders also exist.





► Hoopoes can mainly be met with in dune areas, along the forest edge, and on meadows and fields. This hole-nesting bird is rather a dietary specialist, as its long downcurved bill is especially suited to probing the ground for beetle grubs. Crickets are also taken.



The National Park and its buffer zone have recorded more than 200 bird species, of which almost 160 breed. The largest proportion of the avifauna consists of forest-edge birds, while rather a lot of species are also typical for open areas. Many of the ones involved are therefore endangered, and in 1999, the European Parliament recognised KNP as a refuge of European importance. 49 of the species present enjoy protection under the Habitats Directive, with examples including the nightjar,



◀ Black storks in KNP build nests in large trees, some 15-17 m above the ground. A pair may have five nestlings, confined to the nest for two months. Both parents feed the young and defend the nest.

which is very common locally in this area, specialising in dune and heathland habitats. In accessible marshlands with alder forest there are cranes, and there may be almost 120 pairs of them here. Old trees are home to black storks, whose population has risen recently to about 15 pairs. A small songbird almost exclusively associated with oak-lime-hornbeam forest is in turn the red-breasted flycatcher, of which there are some 40 pairs. The related, hole-nesting pied flycatcher is a common bird in the Park.

When it comes to birds of prey, the 10 species include 7 that are basically forest birds, or indeed exclusive to forest habitats. The buzzard and goshawk are the commonest in the area, while open marshy land supports the marsh harrier, and dry sites a few Montagu's harriers. Mown meadows are a favourite hunting ground of the Puszca's lesser spotted eagles, while Poland's largest bird of prey – the white-tailed eagle – has been a nester since 2000. The tawny owl is the commonest of the owls, but two rare cousins present are the pygmy owl and Tengmalm's owl.

Medium-sized forest birds are the jay, golden oriole and several kinds of woodpecker. Lesser and middle spotted woodpeckers are often seen, the latter associated with old oaks, aspens and broadleaved forest in general. The many kinds of small passerine bird include the robin, chaffinch and various tits.

Out on the meadows and swamps, the birds include the little crane and spotted crane, snipe, lapwing and black-tailed godwit. Common meadow birds are in turn the barred warbler, red-backed shrike, reed bunting, rosefinch, grasshopper warbler and stonechat.



▲ The middle spotted woodpecker is a very common woodpecker in KNP, as it inhabits forests in which many of the oaks are old. Pairs of this species are highly territorial, and they differ from great spotted woodpeckers in not excavating holes in wood. Instead, they obtain their food by probing the cracks in bark.





The moose is the largest of the 54 mammal species occurring in Kampinos Forest, and is used to symbolise the National Park. The species was extirpated here in the early 19th century, with efforts at reinstatement only commencing from 1951. The results have been considerable, as there are now 400 of the animals here. Roe deer and wild boar are numerous, while red deer have now become a permanent presence.



► Europe's largest rodents, beavers may weigh 30 kg as adults, attaining lengths of over a metre. The animal is highly territorial, but also loyal to the family and monogamous. Its lifestyle is mainly nocturnal and it is an excellent swimmer. It can also stay under water for as much as 15 minutes.



▼ Poland's bat species are exclusively insectivorous, meaning that they must hibernate through the winter. This entails a fall in body temperature of more than 30°C, with life-functions therefore slowed down markedly, and any nutritional needs met from reserves of sub-cutaneous fat.



▲ Large carnivores, like the lynx and wolf, are at the top of the trophic pyramid and engage in the natural regulation of populations of other species. Their presence attests to good conditions of the environment they live in, and is essential if balance and diversity in an ecosystem are to be maintained.

Oxbow lakes close to the Vistula have otters, while KNP's watercourses are also home to beavers, which are now present in almost all suitable habitat.

The carnivores here are the polecat, two kinds of marten, foxes and lynxes (reintroduced after an absence of many years). The latter were needed, given the absence of large predators able to regulate numbers of herbivores naturally. Wolves made their own way back here a few years ago – for the first time in



over half a century. This is also a very positive presence, since numbers of red deer, roe deer and wild boar are high and the ecosystem was lacking its top predators. Bats form an interesting group of mammals, if hard to observe. They can be seen most readily where they hibernate in dugouts and cellars now specically adapted to the animals' needs by naturalists. The 15 species present in the Park include the brown long-eared bat, barbastele and Daubenton's bat.



► While definitely a forest-dweller originally, the roe deer has adjusted to a situation in which forests are felled by becoming "eurybiotic", and living in woods, but also meadows and fields of crops. The species is no longer very afraid of human settlements either, though it always escapes at the first sight of people.



NATURE CONSERVA- TION

The location of Kampinos National Park close to the burgeoning agglomeration of Warsaw as capital of Poland poses many threats to nature, not least the lowering of the water table, construction within the buffer zone leading to (further) habitat fragmentation and isolation, and excessive penetration of wild areas by people and the pets (and even the seeds of garden plants potentially on their boots) that they bring with them, as well as the litter and threat of fire that are both quite tangible effects. The Park administration has as its task the counteraction or minimisation of the negative impacts human beings can exert on nature.

As many as 22 areas of the Park (covering 12% of its area) have been left to nature entirely, in the 4642.97 ha coming within Areas of Strict Protection. The largest and most precious is the Roman Kobendza Sieraków Strick Protecion Area with the Forest's largest tree-covered swampland with dunes. Also of major importance is the Krzywa Góra Area, which includes all the types of forest present in the *Puszcza*.

A particular way of engaging in passive protection involves single trees. Within its borders, the National Park has 69 living trees declared Monuments of Nature. The oldest is the ca. 300-year-old "Kobendza Oak" which is 27 m tall and with a girth of 582 cm. The Park's buffer zone in turn has more than 1000 trees protected in this way, many of these in five avenues (mainly of lime trees) that are home to rare insects like the hermit beetle.

Active protection in fact takes in more than 70% of the area of the National Park, with most of the work carried out in forests involving change away from artificially planted pines in the direction of the mixed type forest that is so much more resistant to unfavourable environmental factors. This is a step-by-step process that above all involves giving nature a helping hand. Also run for several years now are campaigns seeking to achieve the elimination of invasive alien species that include black cherry, robinia and goldenrod (which are all three species from the Americas).

Strict Protection is a passive form by which a designated area is left entirely to nature, with no further human interference taking place. In this way, ecological processes are left free to take their course.

Active Protection entails the pursuit of various protective measures that help speed up the regeneration or renaturalisation of nature distorted in one way or another by longstanding human activity; or else retain semi-natural habitats, plant communities or species that are considered desirable.



The Kalisko Strict Protection Area.



Dead trees only rot slowly, enriching the soil and helping the forest retain water as they do so. Meanwhile, they are habitat for thousands of kinds of fungi, insects, worms, centipedes, arachnids and snails. In this way, a dead tree can actually be more "alive" than a living one!



Active protection measures also take in open areas supporting semi-natural meadow communities that appeared through decades of extensive management involving mowing or grazing. The precious and rare species occurring here include several kinds of orchid and the large pink, butterflies known as the scarce large blue and large copper, and birds like the lapwing and redshank. Meadows are protected by mowing and the limiting of natural succession (e.g. by removing bushes). The timing of this matters, as it has to follow both birds' incubating and rearing of their broods and plants' flowering. Active protection is currently practised across an area of meadow covering more than 1000 ha.



Programmes of species reintroduction have long been engaged in here, the aim being to bring back organisms formerly present in this part of the country. A successful effort to reinstate the moose began even before the Park was founded, while beavers and lynxes were brought back in 1980 and 1992 respectively. Efforts to reintroduce plants have also been made, with target species including yew, Polish larch and pasqueflower.

A problem only partly solved by active protection measures is the rectification of situations in which original water relations have been disrupted. Weirs are installed along watercourses to curb excessive surface runoff and help keep water in the National Park. At present, such measures are confined to areas with no private land-holdings. Although the buy-back of this kind of land has been continuing for almost 40 years now, the process is still far from complete, meaning a checkerboard of private and state-owned land that hinders both effective conservation measures and the lives of remaining residents.

Kampinos National Park also includes – at Smardzewice – the President Ignacy Mościcki Breeding Centre for European Bison. Founded in the 1930s, the Centre continues to engage in the enclosure-based breeding of the species.

A hugely valuable feature of the Park is the still-preserved cultural landscape of Mazowsze, with its mosaic of fields and pastures, pollarded willows and stacks of hay piled up around poles for the winter. But if this farmed but still quite-natural



The retention of certain plant and animal species requires active measures. Areas now cleared of scrub and kept mown offer ideal habitat for the likes of the scarce large blue butterfly and many kinds of orchid. ▼



landscape is to resist an ongoing process of decline and disappearance (in the vicinity of a large agglomeration in particular), then extensive farming has to be pursued and appropriate protective measures resorted to. It was with this aim in mind that 4 Landscape Protection Areas covering a total of 3000 ha (or 7.6%) of the Park were set up.

Chances of the valuable landscape being preserved rose in 2004 when Kampinos National Park became a part of the "Puszcza Kampinoska" Natura 2000 site (PLC140001). The designation was in line with both the Birds and Habitats Directives of the European Union. Also added to the European Ecological Network was the adjacent part of the Middle Vistula Valley (PLH140029), as well as the Kampinos Vistula Valley (PLH140029), the Modlin Forts (PLH1400200) and the Smardzewice Woods (PLH100024). A matter of huge significance here is that Natura 2000 does not merely seek to protect the most precious species of plant and animal, as well as habitat, in Europe, but also works to ensure that this is integrated with utilisation of an area by people.

Landscape protection is a means of protecting a Park in such a way that characteristic landscape is retained. This means that limited agricultural, forestry or fishery management needs to be continued with, and tourism is permitted.



◀ The people who began to use Mazowsze's willows were settlers from Frisia (modern Germany and Holland). These "Olendrzy" planted the trees on banks and by channels. Branches were used to make woven fences, this "spilling" helping retain fertile silts transported by the river at times of high water.

SCIENCE EDUCATION TOURISM

The National Park serves functions other than the purely protective, which are no less important from the point of view of both nature and society. Scientific (i.e. hydrological, hydrogeological, zoological, botanical, ecological and social) research has been carried out here for years now, and the Park is home to the Kampinos Base Station for the Integrated Monitoring of the Natural Environment, which forms part of the national environmental monitoring network. KNP is the site of many different research programmes – of its own, or involving outside institutions.

Nature education represents an important sphere of activity, with two units above all involved in this being the Education Centre at Izabelin and the Roman and Jadwiga Kobendza Teaching and Museum Centre at Granica. A series of concerts, exhibitions, festivals and other types of event are organised, and are a source of much interest, especially among the inhabitants of Warsaw and environs. Activities of this kind also help bring communities together, with the involvement of local authorities and NGOs as much as Park employees.



KNP is the site of intensive scientific research and monitoring of nature.



KNP's educational activity also includes regular trips with Park employees under the headings of the "Kampinos Academy" and "Nature on the Horizon" Programmes. Participants may be hosted, not only by Park staff, but also by scientists and experts in various different fields.

Events proving very popular are the KNP Open Days, organised since 2009, and allowing participants to attend meetings, talks and workshops, make field trips to the most interesting parts of the forest, and join in with various educational games for children and adults alike.



A permanent fixture on KNP's calendar of educational events for more than 20 years now has been the competition testing knowledge of this Forest entitled Co w Puszczy piszczy? (What squeaks in the Forest?) The contest is organised jointly by the Nowy Dwór Cultural Centre and the Park's Teaching Centre and Museum at Granica.





Lovers of photography have met at the KNP Education Centre at Izabelin since 2004. Hosted here in the second half of November is the "Visions of Nature" International Festival of Nature Photography, co-organised by the Park and the Union of Polish Nature Photographers.

Since 1999, September has seen KNP play host to the Science Festival, whose main participants are young people from Warsaw and the surroundings. The event is under the patronage of the Confederation of Rectors of Warsaw Higher-Education Institutions, the Praesidium of the Polish Academy of Sciences and the President of Warsaw.

Kampinos National Park receives nearly a million visits from tourists each year. On foot or by bicycle, they make use of the trail network, viewing points and properly-equipped rest-stops. Many take to their cross-country skis in winter. Fans of this Forest also include many painters, sculptors and photographers who draw inspiration from nature. This area has also provided outdoor locations for a great many films and TV series.



It was in the Kampinos Forest that the first organised nature-trip into the Polish lowlands took place, when a group of 387 left a jetty on the Vistula in Warsaw on June 2nd 1907, sailing down to Gniewniewice, from where they crossed the Forest to Nowa Dąbrowa. The organiser of the whole visit was the Polish Sightseeing Society.