



Flora & fauna

Flora of PKPK as well as the whole “North Unit” to some extent varies from the flora in other regions occurring in lowland Poland. Furthermore it is characterized by the share of several geographic elements of flora which is typical for this region. The thing that distinguishes Knyszyńska Forest from the other forest complexes is its remarkable boreal character. Boreal and subboreal associations occupy 60 % of forest communities in the Park. Subboreal features are dominated by the presence of pine coniferous forests - *Carici digitatae Piceetum*, mixed multispecies coniferous forests - *Serratula Piceetum*, moist coniferous forest - *Myceli Piceetum*. Boreal character definitely can be also found in swamp spruce tree communities - *Sphango Piceetum*, marshy coniferous forest – *Vaccinio uliginosi Pinetum*, moss coniferous forest – *Carici chordorrhixae Pinetum*, marshy pine-birch wood – *Thelypteris Betuletum*, and spruce riverside forest – *Piceo Alnetum*.

The flora of Knyszyńska Forest consists of 843 vascular plants (including 26 species of pteridophytes which constitute about 38% of the total vascular flora in Poland. It have been recorded about 200 species of mosses and liverworts and 280 species of lichens. Present state of flora researches in the Park is not entire as many species are still awaiting description. Is it therefore that numerical data shown here is understated.

Spreading anemone. Photo: KFLP





Today knowledge regarding Knyszyńska Forest allows to claim that it is undoubtedly an extremely interesting natural object. According to a great variety of habitats with a great amount of flora and fauna Knyszynska Forest Landscape Park is not below the other well-known and precious natural objects. Unique flora of Knyszyn Forest very often can be hardly found in other parts of the country.

As a forest complex with its unique environmental resources Knyszyńska Forest varies from the other ones occurring in Poland especially in terms of flora. This is the result of different climate features – typical for north-eastern Poland. For this reason a transitional character of flora can be met here which is distinguished by infiltrating of elements from the middle Europe as well as north-eastern Europe. A number of plant associations commonly occurring in Eastern Europe possesses here its eastern and south-eastern borders of range or at the same time its main allocation in Poland.

The most characteristic feature is a considerable share of spruce in forests. There is a lack of tree species such: sycamore, European beech, silver fir, Polish larch. Sessile oak – west European species which can be found in “Stara Dębina” reserve and also around it reaches here its northern-east border.

About uniqueness of Knyszyńska Forest decides also a presence of

specific ecotype of Scotch Pine called also Supraska Pine or Mast Pine. At present they are the most beautiful and the most attractive examples of this species in the country and presumably in Europe also.



Pines in "Wielki Las" reserve. Photo: Arch. KFLP

Fauna of Knyszyńska Forest is typical for European Lowland and similar to ones occurring in Augustowska and Białowieska forests. It does rather not belong to areas with exotic species which can be found only here.

The knowledge about biodiversity of small mammals species occurring in the Park is still insufficient and limited to its small fields. However rich biodiversity of plant associations, numerous, well preserved, natural forest fragments make suitable conditions for living small mammals not existing elsewhere anymore. The knowledge about species biodiversity mainly comes from bird's droppings as well as trans using

droppings as well as traps setting.

There have been recorded presence of 18 small mammals including 4 insectivorous species including: mole *Talpa europaea*, common shrew *Sorex araneus*, Eurasian pygmy shrew *Sorex minutus* and European water-shrew *Neomys fodiens*. The remaining ones belong to rodent species represented by bank vole *Clethrionomys glareolus*, harvest mouse *Micromys minutus*, northern birch mouse *Sicista betulina*, European pine vole *Pitymys subterraneus*, common vole *Microtus arvalis*, tundra vole *Microtus oeconomus*, striped field mouse *Apodemus agrarius*, yellow-necked mouse *Apodemus flavicollis*, house mouse *Mus musculus*, wood mouse *Apodemus sylvaticus*, common rat *Rattus norvegicus*, European water vole *Arvicola terrestris*, forest dormouse *Dryomys nitedula* and common dormouse *Muscardinus avellanarius*. The last two ones belong to dormice family. These animals lead arboreal life with nocturnal activity. They live in old wood stands with natural character. In this forest they can find proper foodstuff (fruits, seeds, insects). The presence of dormice family species explains high level of natural environment in Knyszyn Forest.

One of the biggest and most attractive animal in Knyszyńska Forest is the bison *Bison bonasus* – the biggest European mammal. The founder of present herd was a lonely bull which had migrated from Białowieża Forest probably in 1969. In 1973 another 5 (two bulls and three cows) were brought from there and set free in the Wąliły Forest District. From that time the herd has been developing constantly and now consists of over than 100.

Bisons at the glade. Photo: Arch. KFLP





Equally attractive dweller of forest is undoubtedly the deer *Cervus elaphus* whose horns reaches here enormous size as well as quality. The artiodactylous mammals are represented also by frequent wild boar *Sus scrofa*, deer *Capreolus capreolus* and elk *Alces alces* which appeared in Knyszyn Forest quiet recently as an emigrant from main refuge in north-eastern Poland – Biebrza marshes. Its population is not high.

Among the predators one can find the representatives of the canidae family such as: wolves *Canis lupus*, foxes *Vulpes vulpes* and raccoon dog *Nyctereutes procyonoides*. The mustelids family is represented by badger *Meles meles*, river otter *Lutra lutra*, stone marten *Mustela foina*, least weasel *Mustela nivalis*, common stoat *Mustela erminea*. The lynx *Lynx* represents the felids family.

Lynx. Photo: Arch. KFLP





On the river-sides and spring-sides it is possible to meet muskrat *Ondatra zibethica* and beaver *Castor fiber* then again European hares *Lepus europaeus* are present on forests' edges. Walking in the forest it is easy to see squirrel *Sciurus vulgaris* while the hedgehog *Erinaceus europaeus* can be seen near to homesteads.

Flying mammals – bats are specific inhabitants of Knyszyńska Forest. This group include among others: barbastelle *Barbastella barbastellus*, serotine bat *Eptesicus serotinus*, pond bat *Myotis dasycneme*, Daubenton's bat *Myotis daubentoni*, common noctule *Nyctalus noctula*, Nathusius pipstrelle *Pipistrellus nathusii*, common pipstrelle *Pipistrellus pipistrellus*, common long-eared bat *Plecotus auritus* and parti-coloured bat *Vespertilio murinus*.



Barbastelle. Photo: Marek Abramowski