

Name of the place:			
Bee forest			
Basic information			
Cadastral zone	Augustów city, Podlaskie Voivodship, North-eastern Poland		
Land register reference	200105_2.0020.AR_17.172		
Owner	Polish State Forests, Augustów Forest District		
Contact	https://bartnictwo.com/pl/		
Latitude GPS	53.871043, 22.999051		
Area	4,50 ha		
Altitude	123,9 m above sea level		
Description of wider relations			
Growing culture	Mixed swamp forest.		
The nature of the land	Wet mixed forest, managed by the State Forests. This area is important for water retention in the region.		
Current use	State managed forest.	Comm.:	
Water or water source	High groundwater level, swamps close by, the Białe Augustowskie and Necko Lakes, Rospuda valley.		
Territorial relations	State Forests management		
Forest management plan (FMP)	Yes	Valid through	2014-2023
Age: in %	alder (<i>Alnus glutinosa</i>), spruce (<i>Picea abies</i>)	25-50	20%
	pine (<i>Pinus sylvestris</i>), spruce (<i>Picea abies</i>), alder (<i>Alnus glutinosa</i>), birch (<i>Betula pendula</i>), maple (<i>Acer</i>), linden (<i>Tilia cordata</i>)	50 and more	80%

Biota – forest cover and its inhabitants

Vegetation as from resources		state
Phytocenology	mixed swamp forest	
Original natural vegetation	Original natural vegetation is related to the wetland forest – pine (<i>Pinus sylvestris</i>), alder (<i>Alnus glutinosa</i>), birch (<i>Betula pendula</i>)	
Potential natural vegetation	birch (<i>Betula pendula</i>), spruce (<i>Picea abies</i>), pine (<i>Pinus sylvestris</i>), linden (<i>Tilia cordata</i>)	

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Forest stand: in %	Tree layer:	pine (<i>Pinus sylvestris</i>), spruce (<i>Picea abies</i>), alder (<i>Alnus glutinosa</i>), birch (<i>Betula pendula</i>), maple (<i>Acer</i>), linden (<i>Tilia cordata</i>)	
	Shrub layer:	rowan (<i>Sorbus aucuparia</i>), hazel (<i>Corylus</i>), maple (<i>Acer</i>), alder (<i>Alnus</i>), spruce (<i>Picea</i>), sea-buckthorn (<i>Hippophae</i>)	
	Herb layer (description):	ferns, grasses, sedge (<i>Cyperaceae</i>)	
Fauna – remarkable, known-but-not-seen			state
Vertebrates	moose (<i>Alces alces</i>), hazel grouse (<i>Tetrastes bonasia</i>), woodpeckers (<i>Picoides tridactylus</i>), Eurasian beaver (<i>Castor fiber</i>), red deer (<i>Cervus elaphus</i>), roe deer (<i>Capreolus capreolus</i>), wild boar (<i>Sus scrofa</i>), wolf (<i>Canis lupus</i>)		
Insects	ticks (<i>Ixodes</i>), bees (<i>Apis</i>), wasps (<i>Vespidae</i>), ladybugs (<i>Coccinella</i>), dung beetles (<i>Geotrupes stercocarius</i>), forest beetles (<i>Anoplotrupes stercorosus</i>)		

Forest as a cultural aspect of the landscape

PAST

Culture

<p>What has influenced the forest so far, is it somehow connected with the culture of the surrounding environment, is it part of the cultural development of the landscape?</p>	<p>The relationship between bees and humans has a long, rich history and thus significant influence on culture. Linnaeus already emphasized this by giving these animals a Latin name that referred directly to the Egyptian goddess Apis and to "the one who carries honey" (<i>mellifera</i>). Moreover, bees had an impact on specific areas of culture such as literature. The Polish writer Ujejski compared his compatriots to bees, saying "the nation is small but like a bee in a hive..." referring to the troops fighting Russians. In the north-eastern part of Poland, forest beekeeping traditions are very strong. Beekeeping was popular among the 16th and 17th century. However, in the 19th century, forest beekeeping was forbidden due to political reasons. For several years now, apiculture enthusiasts in Augustów</p>	
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	have been trying to keep the beekeeping tradition alive; they do so by establishing and maintaining beehives on the trees in the Augustów Primavel forest.	
Civilization		
What is the relationship between the forest and civilization now, how does the civilization reflect on its state and development?	The bee was a positively perceived animal due to its apparent diligence and the production of honey. In many places, it was common to believe that harming or killing a bee would bring misfortune or even death to the culprit. In earlier times, if the owners of a given apiary died, tradition required informing the bees by knocking on the hive. These examples show the closeness between people and bees. Forest beekeeping was the primal way of getting honey. People who live in areas surrounded by big forest complexes have their lives closely related to the forest; they work and live in harmony with it.	
Story		
Origin of the relation	The relationship between man and bee, according to DNA research published in NATURE, shows that our cooperation has already been taking place 9 thousand years ago. The main reason why man domesticated bees was for honey. This product has become a material for the production of food, drink, medicine and even magical properties had been attributed to it. This forest is a part of one of the biggest primeval forests in Poland, and it is located in the north-east part of the country. Old forest complexes and high availability of water are the perfect conditions for forest beekeeping.	
PRESENT		
There are problems resulting from human activities that affect insects. People try to increase the biodiversity in forests while also keeping the old tradition of forest beekeeping (which can be a viable way to use the forest and get an income without timber production).		Notes and questions
Natural side of present development		
	Nowadays, there are fewer and fewer bees due to the progressing chemicalization in agriculture, among other things. The lack of plants that are necessary for the survival of bee colonies and the direct killing by pesticides affects the decline of the population of these animals. Activities of various nature groups and honey hunting associations try to remedy this situation. Practicing forest beekeeping traditions could be a way to protect forests (no timber production = no cutting), increasing biodiversity and helping protect the wild pollinators.	
Threats and limits		
	Pesticides used in agriculture, lack of appropriate	

	habitats, insufficient food sources, no bee-friendly tree species, destruction of hives by animals and people.	
FUTURE		
		Notes and questions
Natural side of future development		
	Creating habitats for bees and settling them in artificial forest beehives.	
Threats and limits		
	One of the problems may be a lack of understanding on the part of agriculture. The solution here will be to find a substitute for pesticides that does not harm the insect. Lack of understanding of local people might also pose an issue.	
Intention of the forest activities		
Expectations	Restoration of the population of wild bees to a stable number so that the species can survive. Getting own honey from forest hives.	
What will my forest provide to people	The forest in which bees will be found will generate a source of natural and ecological food for people in the form of honey and will positively affect the natural balance of the area, especially when it comes to biodiversity in a given forest, in regards to both animals and plants.	
Plan – in 10 years	Planting trees which are crucial for bees (bee food source). Establishing forest hives.	
Plan – in 50 years	Restoring hives, monitoring, planting new trees.	
Who do we need to reach the goal?	Support of local people and local foresters, change of the way the forest is managed.	
Proposals and steps		
What	Legend	Who
Bee population monitoring	Checking and keeping reliable data on the state of the bee population.	Forester + bee hives owner
Improvement of habitats for bees	Planting melliferous plants, creating artificial hives, limiting negative activity of pesticides by creating pesticide-free zones.	Forester + bee hives owner
Education	Educational lessons in schools, organizing thematic meetings, distributing information on the Internet, e.g. using posters.	Forester + bee hives owner / <i>Fratrum mellicidarum</i>

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Bee surcharges	Searching for funds for people who would like to get involved in the protection of bees or making their area habitable for these insects.	Forester + bee hives owner
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Monitoring the development

Time		
10.2021	Meeting with the bee hives owner	
05.2022	Planning of activities	
12.2022	Bee population monitoring	
03.2023	Planting melliferous plants	
05.2023	Educational activities, creating bee hives	

Inspiration

Literature		what
	„Ochrona prawna pszczół w Polsce” Ziemowit Witkowski	
	https://bartnictwo.com/pl/bractwo-bartne/	
	https://tradycyjne-bartnictwo.pl/	
	http://lasy.gov.pl	
Heard around	Piotr Piłasiewicz	
Meetings	10.2021, 05.2022	
Discussions within the project team	10.2021, 05.2022, 11.2022	