

NATURE RESERVE "REJNA"



Protection plan for the nature reserve "Rejna", established by the regional director of environmental protection in Bydgoszcz on 12 December 2011.

Based on Article. 19 sec. 6 of the Act of 16 April 2004 on Nature Protection (Journal of Laws of 2009, No. 151, item 1220, as amended¹), the following is hereby ordered:

§ 1. A conservation plan for the "Rejna" Nature Reserve, hereinafter referred to as "the Reserve", is established.

§ 2. 1. The purpose of conservation in the reserve is preserving for scientific and educational reasons the natural position of the dwarf cherry *Cerasus fruticosa* in the lush mixed forest.

2. The natural and social conditions for the implementation of the protection objective referred to in para. 1, is:

1) Forest nature reserve,

2) location of the reserve entirely on land owned by the Treasury managed by Polish State Forests State Forests, Gniewkowo Forest District,

3) location of the reserve within a compact forest complex.

§ 3. Identification and identification of ways of eliminating and limiting existing and potential internal and external threats and their effects in the reserve area is presented in the table constituting Appendix No. 1 to be issued.

§ 4. Active protection covers the whole area of the reserve.

§ 5. Identification of protective measures in the area of active protection, including their type, scope and location, is presented in the table constituting Appendix No. 2 to the ordinance.

§ 6. 1. Identification of areas and places available for educational and tourist purposes, and the ways in which they can be made available are presented in the table and map enclosed in Appendix 3 to the ordinance.

2. The area does not indicate areas and places available for scientific, recreational, sports, amateur fishing or fishing purposes.

§ 7. There are no places where production, trade and agricultural activities can be carried out in the nature reserve.

§ 8. No arrangements are made for study of conditions and directions of spatial development of the commune of Dąbrowa Biskupia, local spatial development plans, spatial development plan of the Kujawsko-Pomorskie Voivodeship concerning the elimination or reduction of external and internal threats.

§ 9. Regulation No 13/2010 of the Regional Director for Environmental Protection in Bydgoszcz of 28 April 2010 on the establishment of a conservation plan for the nature reserve "Rejna" (Journal of Laws No. 103, item no. 1332).

§ 10. The order shall enter into force 14 days after it's publication in the Official Gazette of the Kujawsko-Pomorskie Voivodeship.

Identifying and identifying ways of eliminating or reducing existing and potential internal and external threats and their effects in the reserve area:

Lp.	Identification of internal and external threats.	Methods of elimination or reduction of existing and potential internal and external threats and their effects.
1	Transformation of plant communities, leading to the shade of the dwarf cherry <i>Cerasus fruticosa</i> .	Removal of an excess of undergrowth threatening to stunt cherries <i>Cerasus fruticosa</i> .
2	The crossing of the dwarf cherry <i>Cerasus fruticosa</i> with the common cherry <i>Cerasus vulgaris</i> .	Not introducing to the surrounding forests Common cherry <i>Cerasus vulgaris</i> .
3	Expansion of alien plant species, especially the black chickens of <i>Padus serotina</i> .	Successive removal of alien species Plants, including American cherry <i>Padus serotina</i> .
4	Destruction of the stalls of nineteen stallion <i>Carlina acaulis</i> and the dwarf cherry <i>Cerasus fruticosa</i> , in connection with protective treatments to overchill the undercoat.	Protection of protected plant posts. At the end of the work, cut biomass out of the reserve.
5	Mechanical damage to the dwarf cherry specimens of <i>Cerasus fruticosa</i> as a result of windbreaks and tipping of trees.	Removal of trees posing a direct threat to the dwarf cherry <i>Cerasus fruticosa</i> .
6	Pressure from the local population and tourists.	Current patrolling of the reserve by Service of the forest during the intensity of tourism. Setting the information board Educational character.

Identification of conservation actions in the reserve area, including their type, scope and location:

Lp.	Type of protective measures	Scope of protective measures	Location of protective measures
1	Reduction of the undergrowth, mainly <i>Corylus avellana</i> common hazelnuts for the protection of the dwarf cherry <i>Cerasus fruticosa</i> .	The treatment should be Run on an area of about 2ha, At least once every 5 years.	In places where cherry occurs The dwarf <i>Cerasus fruticosa</i> , which Creates irregular clusters throughout the reserve, on aggregate Area of about 2 hectares.
2	Successive removal American chickens <i>Padus serotina</i> .	The treatment should be Run on Area of about 5.78 Ha, at least once every 5 years.	Around the reserve area
3	Removal from posts <i>Cerasus chrysanthemum</i> <i>Fruticosa</i> winds And tree tipping	The treatment should be performed after the need arises.	Around the reserve area

Indication of areas and places made available for educational and tourist purposes, and how to share them:

Lp.	Purpose of sharing.	Shared areas or places.	Way sharing.
1	Education	On the way between the 199c and 199g releases and the 199 and 218 troops.	Walking and cycling.
2	Tourism	On the way between the 199c and 199g releases and the 199 and 218 troops.	Walking and cycling.

Substantiation

The conservation plan for the "Rejna" Reserve is a document defining the ways of protecting the position of the dwarf cherry *Cerasus fruticosa*. For the proper functioning of the reserve and its protection, the protection plan pursuant to Art. 20 of the Act of 16 April 2004 on Nature Protection (Journal of Laws of 2009, No. 151, item 1220, as amended) is prepared for a period of 20 years. According to Art. 19 sec. 6 of the Nature Conservation Act, the regional director of environmental protection shall establish, by way of an ordinance, a conservation plan for the nature reserve, drawn up on the basis of the guidelines contained in Art. 20 above. Act. The draft of the conservation plan for the "Rejna" reserve was positively reviewed by the local council of the Dąbrowa Biskupia Commune, by the Resolution No. XI / 83/2011 of 21 October 2011 and by the Regional Council for the Conservation of Nature in Bydgoszcz, by Resolution No. 6/2010 of 28 January 2010. The President of the Regional Council for Nature Conservation in Bydgoszcz announced in a letter of 17.10.2011 that after reading the draft ordinance, which included the comments of the Minister of the Environment, sent by letter dated 28 December 2010, mark DP-074-49/59840 / 10 / GD and minutes of the meeting mentioned above. The Council's opinion on the draft plan that the amendments made are of an orderly nature and do not relate to matters subject to the opinion of the Members of the Council, do not include the substance of the issues discussed at the meetings of the Regional Council for Nature Conservation. There was no comment from the site manager - Gniewkowo Forest District. The draft ordinance on the establishment of a conservation plan for the nature reserve "Rejna" was agreed by the Governor of Kujawsko-Pomorskie by order of 5 December 2011, sign: WSRRW.II.6638.17D.2011. Notice of 22 June 2011, sign: WPN. 6202.38.2011.KLD Regional Director of Environmental Protection in Bydgoszcz has informed about the possibility of public participation in the proceedings by reviewing the draft protection plan and the possibility of submitting comments and conclusions. Information was made public in accordance with art. 3 sec. 1 point 11, art. 39 of the Act of 3 October 2008 on the provision of information on the environment and its protection, public participation in environmental protection and on environmental impact assessment (Journal of Laws No. 199, item 1227, as amended) and the Regulation of the Minister of the Environment On 12 May 2005 on drafting a conservation plan for a national park, nature reserve and landscaped park, making changes to this plan and protecting the resources, compositions and components of nature (Journal of Laws No. 94, item 794). No comments were made regarding the participation of the public. The content of the plan is in line with the requirements of art. 20 sec. 3 above. Law of 16 April 2004 on Nature Protection (Journal of Laws 2009, No. 151, item 1220, as amended). The regulation does not include information on areas and locations for amateur fishing and fishing and how to make them available. Due to the lack of standing and flowing water, it is impossible to designate such places. It is not envisaged to provide a reserve for sports and recreational purposes and to carry out manufacturing, trade and agricultural activities. Due to its character and its small surface, Actions would have a negative impact on the purpose of protection. There are no areas and places available for scientific purposes. The provision of a nature reserve for scientific research may take place after obtaining a permit pursuant to art. 15 sec. 1 pt. 24 of the Nature Conservation Act. Obtaining individual consent to run the above. The activities guarantee the supervision of their type and methodology, taking care to ensure that the conservation of the nature reserve is kept in proper condition. Nature trails have been designated for educational and tourist purposes. The way in which the route is made available and the course of the trail is determined by the table and the map constituting Appendix No. 3 of the order. The dwarf cherry *Cerasus fruticosa* forms irregular focus throughout the reserve, covering a total area of approximately 2 hectares. In this plan the most serious threat to the survival of the above mentioned. The species is a natural natural process associated with the overgrowth of woody vegetation, especially the undergrowth, and the entry of the American chickens, *Padus serotina*. Consequently, protective measures have been envisaged to cover shrubs that are endangered by the conservation objective. Because of their lead mainly within the underlays, for which no species share is estimated, only the area and recommended frequency of treatments are indicated. Repeal of the Order No. 13/2010 of the Regional Director for Environmental Protection in Bydgoszcz of 28 April 2010 on the establishment of a conservation plan for the nature reserve "Rejna" (Journal of Pomeranian Pomerania No. 103, item 1332) is Necessary due to the need to take into account the comments of the Minister of the Environment sent by letter dated 28 December 2010, mark DP 074-49 / 59840/10 / GD. Consequently, the provisions of the spatial planning and spatial development plans of Dąbrowa Biskupia commune, local spatial development plans, the Kujawsko-Pomorskie Voivodeship Development Plan, concerning the elimination or reduction of external and internal threats have been abandoned, as the previously mentioned issues concerning the arrangements are set out in separate Statutory acts. In addition, the provisions on matters regulated by the Nature Conservation Act, ie the provision of a reserve for educational or scientific research, with permission of the Regional Director for Environmental Protection in Bydgoszcz (referred to in Article 15 (1) (24) and § 5 of the Nature Conservation Act), and § 2 of the ordinance has been expanded, precisely defining the natural and social conditions of the objective of protecting the nature reserve of the nature reserve. The scope and manner of conducting active protection activities has also been clarified.

LEGAL BASIS OF PREPARATION OF THE RESERVES

The oldest document confirming the occurrence of dwarf cherry in the Forest of Rejna is a forest survey map of 1910, which indicated its position at the then 162 ward (now section 196) at the edge of the field at the intersection of roads. Also A. Wodziczko mentions the occurrence of steppe cherry in forests of Gniewkowo Forest District (Ochr. Przyr. Of 1926). Similar information is provided by W. Kulesza (Ochr., 7, 1927), marking its place on the slope of a strongly cut field in the savanna. From the available information it is clear that in the period between 1926 - 1930 Poznań University organized an expedition in its search. No presence was found. According to the reports of local foresters and workers during the forest years in 1912-1914, the stand at the then branch 162 was cleared for farming. This area was again reforested in 1922 - 1924. Research done after World War II and stocktaking of the reserve. They confirmed the presence of dwarf cherry on branches 198, 199 within Rejna. The first formal effort to take up the position of the dwarf cherry conservation was taken in April 1954. The technical documentation needed to validate the reserve was made in 1959. The nature reserve "Rejna" was created by the Order of the Minister of Forestry and Wood Industry of 31 January 1962, on a total area of 5.80 ha. A copy of the Regulation is provided below. Based on Article. 13 sec. 1 of 7 April 1949 on Nature Conservation (Journal of Laws No. 25 item 180), it is hereby resolved as follows:

1. The nature reserve named "Rejna" is considered to be a forest area of 5.80 ha in Forest Rejna Forest District Gniewkowo, located in the Radojewice cluster in the Bydgoszcz district of Inowrocław
2. Forest reserves 164a2, b and 165a2, b, c1, g, f, as determined in the plan of the forest plant for the period from 1959 to 1968 are included in the reserve. The boundaries of the reserve are marked on a 1: 5000 reserve map, To the appropriate position of the register of protected nature.
3. The reserve is created for the scientific and didactic reasons of the natural position of the dwarf cherry (*Cerasus fructicosa*) in the lush mixed forest.
4. In the reserve area:

- Cutting down trees and collecting woodland, except in cases justified by the needs of a reserve farm, which has been defined specifically for this purpose, a business plan approved by the Chief Nature Conservator; Pending the preparation of the said plan, it is permissible, after consultation with the nature preservator, to remove dead trees, tipping and scrap in a manner that does not jeopardize the environment, and in particular, the growth of the carp; If necessary, care is also available,
- Harvest of fruit and seed of trees and shrubs, except seeds for the purpose of restoration of the forest, the harvest of which may take place under the conditions established by the conservator of nature,
- Collection of medicinal herbs and other plants or parts thereof
- Acquisition of resin, litter and livestock feed,
- Destroying or damaging trees and other plants,
- Soil destruction and mineral extraction,
- Hunting, capturing, scamming and killing wild animals,
- Pollution of land and fire,
- Placing of arrays, inscriptions and other characters, except for arrays and signs related to the protection of terrain,
- Erection of buildings and the establishment or construction of technical equipment,
- Stay outside the designated nature conservation area.

Type and subtype of the reserve

On the basis of the Ordinance of the Minister of the Environment of 30 March 2005 on types, types and subtypes of nature reserves (Journal of Laws No. 60, item 533), the "Rejna" reserve should be counted as:

A. dominant subject of protection

- type of reserve: floristic,
- subtype of the reserve: plants at the border of the range.

B. main type of ecosystem

- Reserve type: forest and borough,
- subtype of the reserve: mixed lowland forests.

C. landscape type:

- glacial sandy, wavy.

D. Natural and forest regionalization: Krapina III Wielkopolska-Pomorska

PURPOSE AND OBJECTIVES OF THE RESERVES PROTECTION

The purpose of conservation in the "Rejna" reserve is the protection, preservation and stabilization of stunt cherries - *Cerasus fruticosa*, on the north-western border of its range. Subjects of the conservation are all elements of the nature of the living and non-living nature, including a number of species rare and protected species (among others, ninety-two freeze).

LOCATION, BORDERS AND ENVIRONMENT OF THE RESERVES

A) Physical, geographic and natural location

Geographical classification: Świecka Vetch (314.73).

Geobotanalization: Land: Pomeranian Southern Transitional Pass

District: Tucholskie Forests.

According to natural-forest regionalization, the nature reserve is located in the III nature-land region

Wielkopolska-Pomeranian, in the Wielkopolska-Kujawska Lowland District.

B) Province: kujawsko-pomorskie,

County: inowrocławski,

Commune: Dabrowa Biskupia.

C) Limits and surroundings of the reserve

The reserve is located in the Kujawska Lowlands, in the eastern part of the Rejna - Balczewo, between Inowrocław - Modliborzyce - Dabrowa Biskupia in the north and Inowrocław - Radojewice - Dabrowa Biskupia in the south. The reserve is located among forest land of the Gniewkowo Obrebu. The eastern and southern boundaries of the reserve are branch lines. In the northern part of 198 The boundary of the reservation runs through the boundary and then turns north and crosses the dune shaft and continues along the northern foot of the dunes. The northern boundary runs along the tree stands. The surface area of the reserve is based on the network of branch lines and forest areas of Gniewkowo

CHARACTERISTICS AND DIAGNOSIS OF THE NATURE OF THE RESERVES

1) Climatic conditions:

The climate of this area is transitory between continental and oceanic influences. It is characterized by high variability of weather determined by the frequent influx of air masses with opposing physical properties. The beginning of vegetation falls on average on the first days of April, the end of vegetation for the first decade of November. Late spring frosts occur quite often in May and sometimes in June. The basic climate indicators from the last period are as follows:

- average annual temperature 7.5 - 8.00C,
- average January temperature -2.0 - -2.50C,
- Average temperature of July 18.0 - 18.50C,
- average annual rainfall sum of 500-550 mm,
- length of vegetation period 210 - 220 days

2) Water relations:

Through the forest complex Rejna-Balczewo there is a blurred watercourse of two basic catchments in the country, the Vistula and the Oder River. The reserve is located in the river basin of the Vistula River (I government), Teżyna (II government) and the Parchans Channel (III government), in the catchment area no. 279645: "Parchans Channel from the tributary of Słońsk to the tributary of Zagajewiczek". Groundwater is deep here and at the top of the high dunes in the north of the reserve, very deep. There are no sources here, and water reservoirs. There is a fluid type of water management here.

3) Gothic construction

Rejna-Balczewo Nature Reserve, in which the reserve is located, is situated in the Tychyna Valley. Pomeranian river sands occur here at the end of the Pleistocene process. There are two dunes in the nature reserve. In the northern part of the high dune with a distance of over 10 m, it runs east-west. The second high dune embankment is the eastern boundary of the reserve in the southern part of it. Inter-war areas occupy flat, old, Pleistocene river basins. These works are made of fine sand, fine dust, dusty dust with a dust content of 20-30%. The fine-grain and dustiness of the geological reserves and the associated higher capacity of the sorption complex determine their relatively high fertility. The reserve area is generally flat, from 85 m n.p.m. up to 86 m n.p.m. Only the summit of the dunes to the north of the reserve reaches 95 m. The distance is about 10 meters.

4) Soil reservation:

A) Soil classification and morphology

In the "Rejna" reserve, two basic typological units were distinguished and classified in one type of soils. Soil reserves in the systematic soil of Poland are as follows.

Type - Soil Rust (RD)

Rust-specific soils (RDw)

Root pods (RDb)

Soils of rust (RD).

The diagnostic level of these soils is a sideric Bv level of about 40 cm in thickness, with a uniform yellow-brown color and similar homogeneous grain. It is usually richer in clay and dust fractions from lower levels. In some of these soils between levels of BvC and C there is a subsurface Bk level of enrichment. Their profile structure is as follows:

O - A - Bv - BvC - Cor Cca

The basic process of soil formation is the rusting process. It consists of the formation of immature complexes of caries with semi-peroxides, which, together with the free iron oxides and aluminum, do not move inward but remain in place and form rusty granules on the sand grains. Rustic soils are associated with deep sandy sediments. Often sandy material is enriched with skeletal admixtures or deep, deep layers of loamy sand or clay. The rusty soil mainly occupies the surface of aqua-logs and dump works. The following are the subtypes of soils:

Rusty proper (RDw),

Rusty brown (RDbr).

The rusty soils in the "Rejna" reserve are the only soils in the reserve.

B) Surface variation of soils

The surface of the subtypes of soils in the "Rejna" reserve is as follows:

Rustic soils in this: 5.78 ha

Soils of rust specific 1.78 ha

Soil rustic soils 4.00 ha

Total soil reserve 5.78 ha

The area includes branch lines and forest roads.

5) Forest habitat types

There are two habitat types in the reserve; Mixed forest fresh on an area of 3.74 hectares and mixed forest fresh on an area of 1.71 hectares.

STATUS OF BEHAVIOR OF THE CHERRY CHERRIES

Dwarf cherry (steppe cherry) - *Cerasus fruticosa* is a bush with a height of up to 1.5 m in height. Belongs to the rosary family. Occurs from southwestern Siberia to the Rhineland. Poland is bordered by the north-western frontier of this species. Hence, our country is a rare species. It is found in Kujawy and in the south-eastern part of the country. In the West only exists in Bielinek reserve. It is a species of Pontyjski, warm-blooded. It prefers sunny hills, forest edges, slopes and gorges, exposed edges of river valleys. It is a species of strict species protection. According to the Red Book of Plants is a threatened species - the threat category V. The threat to the species's preservation is its ability to create hybrids with common hawthorn, bird cherry and savory cherry. The environmental index numbers of dwarf cherry are as follows:

- light indicator: 4 moderate light,
- thermal indicator: 5 warmest regions and micronutrients,
- indicator of continentalism: 4 subcontinental species,
- soil moisture index: 2 - 3 dry and fresh soil,
- trophic index: 3 moderately poor soil,
- soil acidity index: 5 basic soil, pH > 7,
- Granulometric indicator of soil: sandy clays and dusty,
- life form: shrub or low tree - up to 5 m height,
- dynamic tendencies: a marked decrease in the number of posts.

It is a species characteristic of All. *Prunion fruticosae*. The present stand of steppe cherry was first described in 1946 at the time of the installation work. In 1948 this area was designated as a design reserve. In 1952 H. Szmidt was created "Plants accompanying the steppe pear in Rejn" and "The history of the steppe cherry in Rejn against the backdrop of steppe vegetation". In 1955 a description of the position of the steppe cherry with a thorough inventory of the positions was made by Cz. Burnicki. Total area of the stands was then 1.81 ha. The inventory of the nature reserve made in 1958 by J. Wieczorek confirms the occurrence of steppe cherry on dense areas: rarely 1.53 ha, up to 10% 0.95 ha, 11-30% at 0.77 ha, 51-80% at 0.80 hectares, and over 80% over 0.80 hectares. The last management plan for the years 1988 - 1997 confirms the presence of dwarf cherries covering 60 - 80% on an area of 2.30 ha. In addition, 199d its occurrence on the area of 0.15 ha. The author of the aforementioned plan confirms the growth of the area of compact cherry stands in relation to previous inventories and the shift of extreme positions of this species to the west. During field work in spring and summer 2008 there was no significant change in the area occupied by this species. Visually the best health state is shown by the cherry blossoms in the southern section of the 199f, the weakest on the sand dunes of branch 198b.

Compatibility of species composition with habitat, tree health, dead tree resources

An analysis of the species composition of forest stands in individual forest communities shows partial compliance in fresh mixed forest habitats on the area of 3.74 ha and the full compliance of stands in the mixed fresh forest on an area of 1.71 ha. As in neighboring stands there are dusky, sometimes scrap and tipping. The dead trees are small. It can be estimated at 3 - 5 m³ / ha.

Reserve flora, protected plants and rare plants.

Flora Reserve "Rejna" counts over 70 species of vascular plants. During the spring and summer of 2008, there were 76 species of plants, including 5 species of trees, 6 species of shrubs, 56 species of herbs, 3 species of ferns and 6 species of bryophytes. Among the rare protected species worth noting in Poland are the *Cerasus fruticosa*, *Pulsatilla pratensis* meadow grass and *Carlina acaulis*, a species of wildfowl species listed in the reserve, their conservation status and habitat, in Section II. "Documentation part of the plan". According to the Ordinance of the Minister of the Environment of 9 July 2004 on the list of species of native plants, which are subject to strict and partial protection (Journal of Laws No. 168, item 1764), the following species of protected plants occur in the "Rejna" reserve:

A) Exact protection:

- * Nineteen uncut *Carlina acaulis*
- * Dwarf cherry *Cerasus fruticosa*
- Hepatica nobilis* common hake
- * *Pulsatilla pratensis* meadow sash

B) Partial protection:

- Lily of the valley *Convallaria majalis*
- * *Dicranum polysetum* with curly hair
- Zetterstedt spearhead *Eurhynchium angustirete*
- * *Frangula alnus* common crush
- * *Hylocomium splendens* glowing
- * *Pleurozium schreberi* rosette

In addition to the above-mentioned species protected by the law in the "Rejna" reserve, there are also those with few or declining populations in Poland. *Carex montana* - *Rubus laciniatus* - Blackcurrant insects In addition to plants, special attention is given to species protected by fungi: *Morchellaceae* and Shameless *Phallus impudicus*. In addition to the above mentioned species and species, total protection should include all fungal species present in the reserve.

Fauna Reserve

The state of research on fauna of the nature reserve "Rejna" is unsatisfactory and the knowledge on this subject is fragmentary. The modest reserve area can not serve as a refuge for large mammals, but is penetrated intermittently by most of the animal species that inhabit the local forests. From the Forest Service of Gniewkowo Forest Protection Department, there are 3 species of amphibians, 4 species of reptiles, 39 species of birds and 20 species of mammals. Species protected include *Hyla arborea* tree frog, *Accipiter gentilis* hawk, *Accipiter nisus* hawk, *Buteo buteo* buzzard, *Dryocopus martius* black woodpecker, *Strix aluco*, and *Sicista betulina*. This area is a refuge and habitat for many small mammals, especially those protected by law - velvet and smudges. From the group of small rodents excellent living conditions are found here vunnoys: bury, ordinary and northern and the ore hole. There are numerous fauna (*Cervus elaphus* deer, *Capreolus capreolus* deer and black scorpion deer) in the reserve and its vicinity. They are also included: *Vulpes vulpes*, *Meles meles*, *Nyctereutes procyonoides* and *Martes Martes martens*. The transgenic species is the wolf *Canis lupus*. The list of species observed in the reserve and in its immediate vicinity is presented in the table in point. II.4 "Documentation part of the plan - List of animal species occurring in the reserve in its vicinity".

Thank you for watching!

Source:

Forest District of Gniewkowo

