



mammadaba

It means Mother Nature.
And it's true.



Latvia's State Forests and mammadaba welcomes you!



She always awaits, listens, provides food and healing, nurtures, brings peace.
She is your mother.

She is also Nature, because Nature is a mother to all.

We at "Latvijas valsts meži" call her – **Mother Nature – mammadaba.**

Warm, sincere and personal.

1 397 824 ha forests **259** comfortable

 **rest** areas

5 lakes



15 footbridges and **90** boats



Castle and **2** guest houses





41 walking paths



70 km long

358 birds

species



Visit Mother Nature
and find yourself cleaner, wiser and happier.

Welcome!

Our doors are always open!


mammadaba

It means Mother Nature.
And it's true.



www.mammadaba.lv

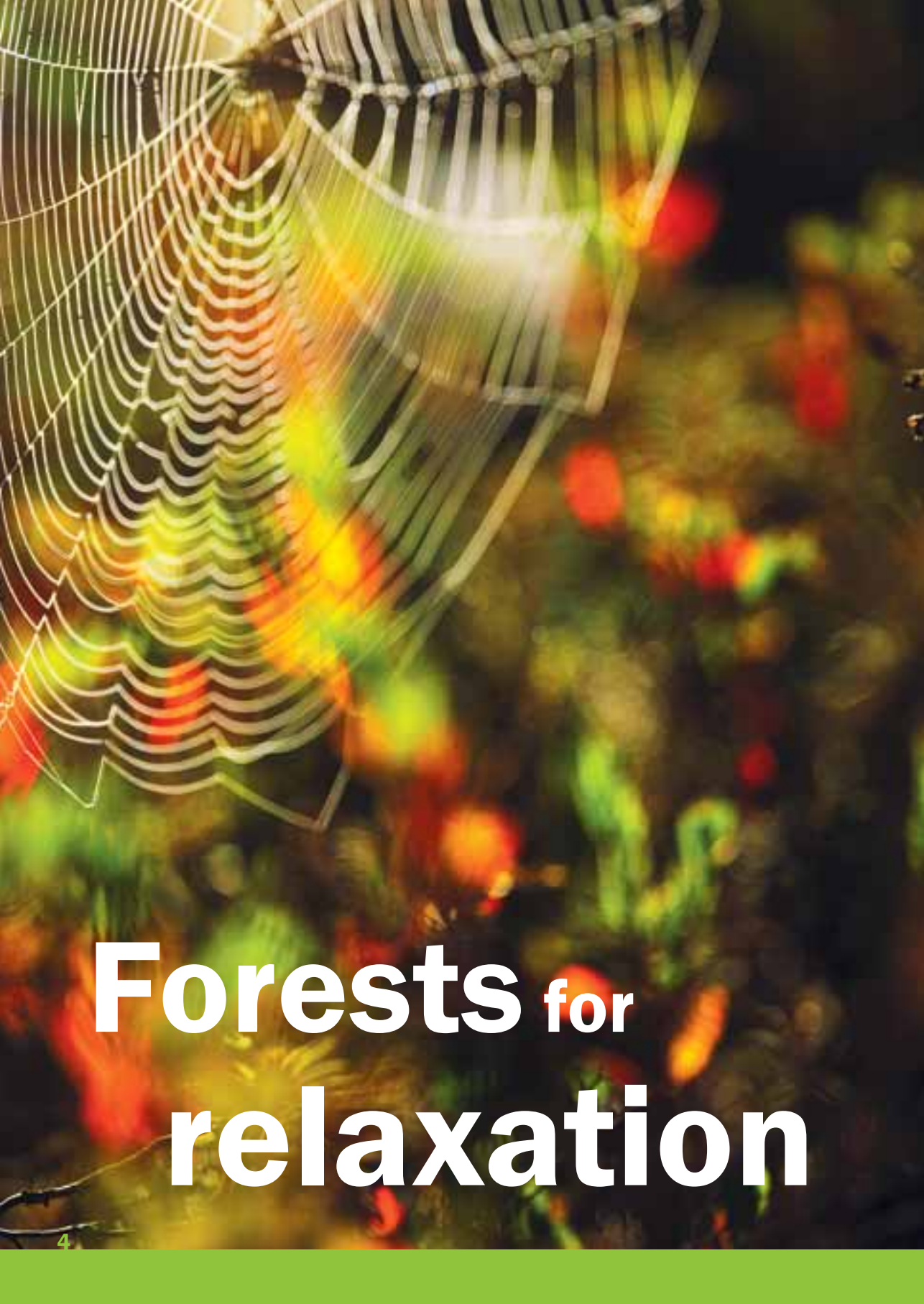


Mammadaba welcomes you!



Forests for relaxation	2
Seeds and plants	4
A First came the seed	6
A world full of flowers	18
B Velnezers Lake	22
C Rabbit field	26
D Elephant Lake	30
E Berlin Intersection	34
F Highest peak of Augšzeme	38
G A view towards Moricsala	42
H Honoring the Latvian Riflemen	46





Forests for relaxation

Latvia is one of the most abundant countries in Europe in terms of forests, in fact it ranks fourth with 56.9% of total land territory (3,8 million ha of forestlands). The joint stock company "Latvia's State Forests"/"Latvijas valsts meži" (LVM) manages about one half of all forests, with 75,000 hectares reserved for public recreation.

In order to bring people closer to nature, giving them the opportunity to become familiar with the forest in all its glory, LVM has done a lot to ensure places for recreation and relaxation in the forests it manages.

All free of charge, there are 320 retreats, 59 tourist attractions, 41 nature trails 70 km total (incl. eight plank-walkways in marshes), and eight observation towers.

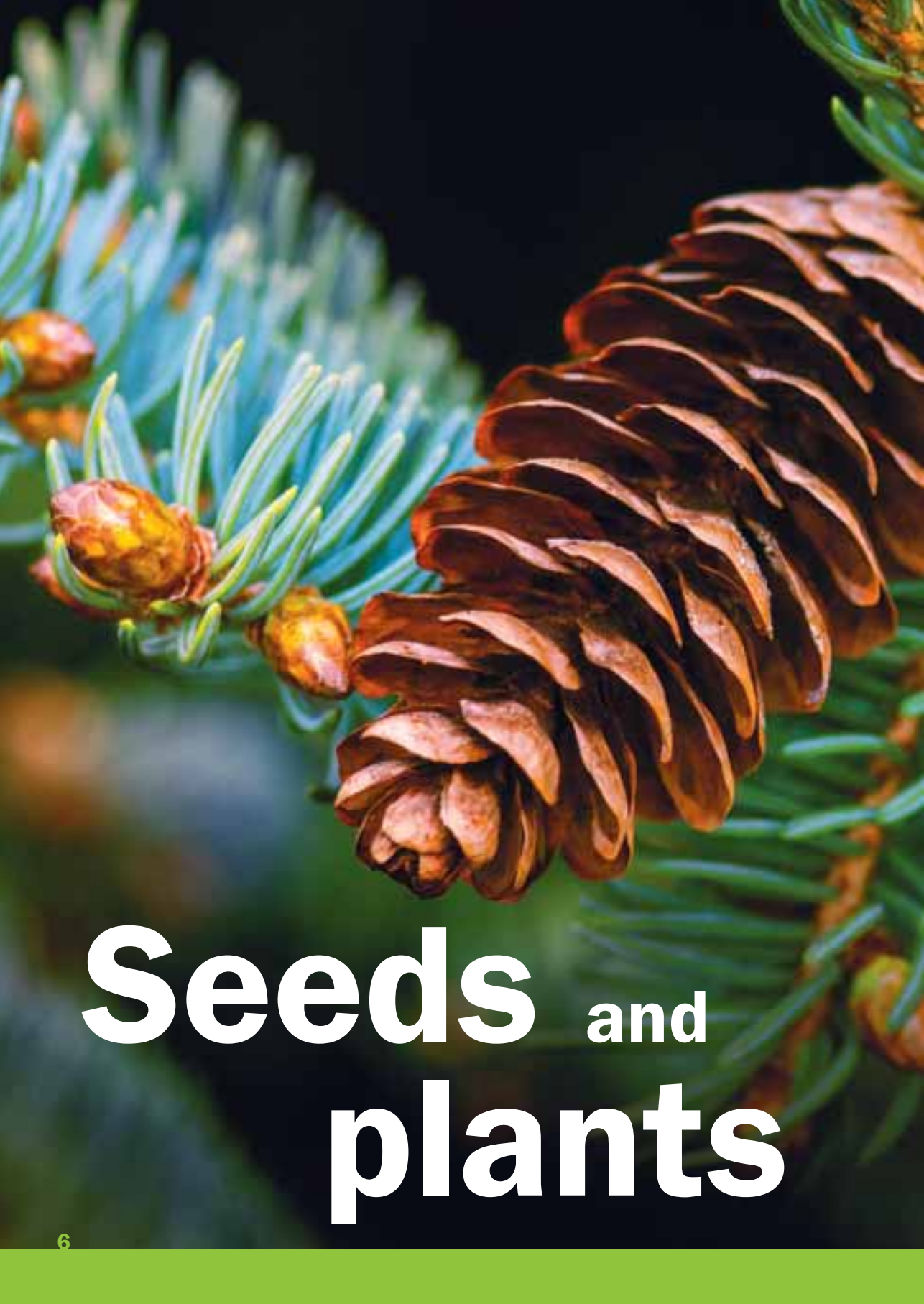
With the objective being to promote rest and relaxation in Latvia's state forests, the LVM trademark Mammadaba was created.

What is Mammadaba? Mammadaba is a cordial invitation from Latvia's forests to commune with nature, get to know its riches, become a part of its untamed beauty. Like a true "mamma", she always awaits and welcomes us, is always prepared to soothe, nurture, replenish and share with us her wisdom and life experience. This edition is a Mammadaba saga about her children.

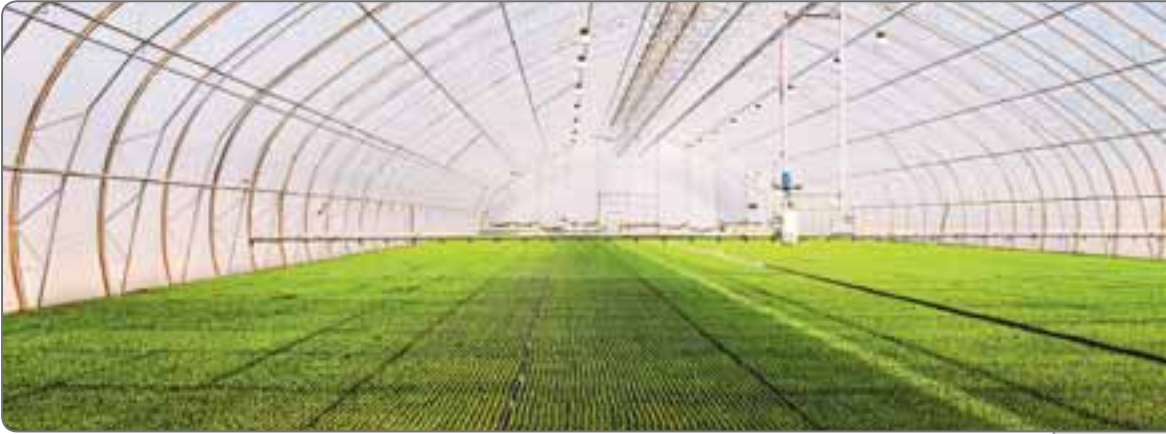


Favorite LVM recreation areas and points of interest

- * Family-friendly Tērvete Nature Park, drawing 115,000 visitors in 2013.
- * Kalsnava Arboretum, with the largest variety of trees and shrubs in eastern Latvia, visited annually by about 8,000 people. A special attraction – blooming peonies – drew 1,000.
- * Mystical Pokaiņi Forest has become a center for spiritual quests.
- * Vīciems čiekurkalte – a cone-drying facility, the only one of its kind in Europe, preserves olden-day machinery and methods.
- * Jaunmokas Castle, ideal for balls, private parties, seminars, overnights, and the Forest Museum in houses, with detailed information about the forest, its inhabitants, care and use.
- * "Ezernieki" and "Spāre" guest houses for rest and relaxation, seminars, athletic events and private parties.
- * Five lakes for licensed fishing with boathouses and cottages.



Seeds and plants



A letter for the coming summers

This saga of seeds and plants could be looked at as a letter for summers to come who do not yet realize that somewhere the LVM division “Seeds and Plants” is already thinking about springtime – gathering cones, preparing seeds, cultivating young trees as the soil yearns to take on new life. In this edition of Mammadaba, you will have the opportunity to read how brown pine cones turn into silver bells – the journey from tiny seed to flourishing green forest. There will be other wonders revealed here: all about aspens growing in test tubes, birch trees finding shelter in greenhouses, daytime transforming into night, about a garden in bloom each year.

About those green thumbs

“We at “Seeds and Plants” can be considered lucky because we stand so close to the advent of a new forest, actually, no one else is closer. But it stands to reason, if you have the opportunity to be part of the selection of the finest specimens, then setting up the plantations, resulting in cones and seeds. And then the miracle of miracles – from these seeds come the highest quality plants, whose sole desire is to take root in Latvian soil, and in due time become a mast pine, rustling spruce, the whitest birch or a fast-growing, impish aspen. Our work is interesting because of its diversity. Almost everyone here specializes in something very distinctive. Some of us, just by looking at the new forest stand, can tell which one will have the vigor to fertilize a new generation. Others know how to pamper the seed, treating it with tender loving care: “sleep... sleep, my child, your dawn will come only in 10 years, awakened like Sleeping Beauty.” In our profession, technologies of the widest array are our assistants – genetic markers, statistical analysis, powerful tractors, computers, robots and mechanisms. But in truth it all depends on the countless green thumbs, the warm and caring hands that encourage the seeds and plants to grow. We have those who can talk to them, those with green eyes, who can see what every plant needs. And finally, those with green hearts, who see in their dreams the care that will be required for future plants.

To my staff, I wish for good health and endurance, but to everyone else – to venture sure footedly on a nature trail, with the young trees connecting our hearts.”



LVM “Seeds and Plants” Director
Guntis Grandāns





First came the seed

“LVM Sēklas un stādi” (“LVM Seeds and Plants”)



Pārupes iela 4, Jaunkalsnava
Kalsnavas pagasts
Madonas novads

Rīga – 140 km
Madona – 28 km
Pļaviņas – 22 km



Kalsnava

The LVM division “Seeds and Plants” (“Sēklas un stādi”) has its green thumb in practically all of Latvia, with tree nurseries in nine locations. As its official home base, the division chose Kalsnava, and many people wonder why. There are a number of reasons, explained in the following text.

Kalzenau, Kalchenovskaya, Kalsnava – since the 14th century as the land barons changed, so did place names. Ruling the Kalsnava region through the years, and all leaving their legacies, were the Bishop of Rīga, Swedes and Russians, the Kahlen and Brummer dynasties. Evolving into a county in Soviet times, several villages were established - Jaunkalsnava, Veckalsnava and Jāņukalns, later, Aiviekste.

Kalsnava is located in the highlands of Vidzeme – a guarantee of picturesque scenery with hills and valleys, rivers and lakes. The highest peak, Lidneskalns – stands 239 meters above sea level, providing a splendid view of the county’s pride and glory – its forests, occupying one-half of Kalsnava’s territory. Latvia’s top mountain – Gaiziņš – is just 20 kilometers away.

The Aiviekste, with its winding and rapid tributaries – the Arons and Veseta, form a lovely picture, as the two above have smaller “sisters” of their own. This makes for a rollicking display as these waters make their way through the woods and fields.

At 23.4 ha, Kalsnava Lake is the largest in the county, and shallow it is not, at an average five meters, and some spots as deep as 13 meters. It has fish aplenty. To spice up the scenery, so to speak, there are sand and gravel deposits, and a string of small bogs. Putting all this together, it becomes clear: Kalsnava County is a feast for the eyes with multiple treasures.





These treasures are reflected by artist Gunārs Krollis in his design for the Kalsnava County coat of arms: a golden buck in a green field, in the shield – three green pine cones. The answer to the ‘why’ here is plain and simple. The Sun-guided stag is associated with hunting, its antlers are symbolic of renewal, and they in turn resemble the Tree of Life. Gold is the embodiment of life and fulfillment; green – flora, especially spring blossoming. Green is an aquarian color of cleansing, signifying hope and eternity. Conifer cones (fertility, seed of life) are another story altogether, as they remind one of the tree nursery, cone-drying facility and arboretum that have ensured Kalsnava’s fame far beyond Latvia’s borders.

Brief history. Forest Research Station “Kalsnava”

Forests had a tough time back in the previous century, ravaged by fires, high winds, insects and the human factor – trees were felled for firewood, especially during the Revolution and WWI. Forests were neglected as the populace was preoccupied with survival. When the situation returned to normal, forest rangers began gathering cones, drying out their seeds so that sowing could get under way. Maybe next to a row of potato plants someone was also growing spruce seedlings in order to regenerate the nearby forest. These efforts were commendable, but far too small scale, eventually bringing about the involvement of the government. Under the Ministry of Agriculture’s Forest Department, the Forest Research Station was formed in 1928. At the outset, its home base was in Riga but from 1930-43 at Baloži Manor near Jugla Lake.

Post-WWII, as part of the Latvian SSR Academy of Sciences, a Forestry Issues Scientific Research Institute was established which needed an experimental base, therefore the Forest Research Station was revived in 1953 at Jaunkalsnava, called “Kalsnava”. In 1964, it was placed under the authority of the Forestry and Timber Industry Ministry. 1976 came and the station had a new manager – the Science and Production Association “Silava”. This status remained until 1991 when “Silava” was reorganized as the Latvian State Forestry Sciences Institute. “Kalsnava” station was transferred to the Forest Ministry, after that it became a unit of the State Forest Service. As a result of institutional reforms, Forest Research Center “Kalsnava” was dissolved in the year 2000. Experts on staff at the station through the years conducted research studies on practically all aspects of forestry, and thanks to them, Kalsnava has the reputation of being a wellspring of educated and intelligent people.

The research center is still in operation, and it manages the scientific research forests not only in Kalsnava but also in Mežole, Jelgava, Auce and Skede with the total area of 33,000 hectares. The sole official and ISTA (International Seed Testing Association) standard-certified forest seed control laboratory is here, as well as a tree nursery with its wide variety of plants, but primarily for selective-breeding for forests. Located here also is the world’s oldest hydrological observation polygon at Vesetnieki.

This brief story is all about an important institution for the forestry sector and the multiple changes it has been subjected to in the course of time, proving that forest management, care and cultivation are ripe with tradition in Latvia and have countless years of experience.

“LVM Sēklas un stādi”

LVM was founded in 1999, and soon after the idea surfaced about a department or division specifically for seeds and seedlings, whose primary objective is to develop them in order to grow plants for the regeneration of LVM forests. Chosen, understandably, to house the division's headquarters was Kalsnava County's Jaunkalsnava – rich in tree-growing traditions.

Under the LVM umbrella are six seed farms and nine tree nurseries, also the Arboretum.



In spring and summer, there are over 50 million seedlings, including container seedlings and bare-root seedlings with improved root system of 39 million, making up 76% of the total. Seedling production and retail process are certified in alignment with the ISO 9001:2008 standard.

Asked what exactly does LVM “Sēklas un stādi” do, here is a short version of the reply – production in three branches:

- Developing forest tree seeds or seed farming sector,
- Developing seedlings or tree nursery/plantation sector,
- Developing decorative plants or decorative plant sector.

Beyond these dry facts lies a wondrous world, where a tiny seed from a fruitful cone becomes a perky shoot, anxious to shoot up to the sky, where the fair lady aspens are so dainty that they grow in sterile test tubes, while the royalty-class birches, finding their inferior cousins a must to avoid, hide out in greenhouses. The shoots and seedlings are in the smartest and safest of hands, protected even by intelligent robots, who, if need be, can turn daytime into night.

Each and every tree nursery is an enormous cradle of life, reminding even the most skeptical that Latvia's forests will forever be ever-green.

Kalsnava Arboretum is like an enchanted forest where witch-hazel and snake spruce grows, not to mention the various pines with their sometime blue, sometime yellow and white needles, where the white fringetree in a flash transforms blossom time into summer blizzard. This place entrances with its colors, shapes and dizzying fragrances.



Improved and superior. Breeding

When the wind starts to play spruce and pine treetops like violin strings, the bristling cones respond in a drone:

– Yes, of course, it all begins with us, the tiny seed that we nurture! So keep blowing, mighty wind, carry our seeds even further to eventually become slender pines or gorgeous spruces!

What the pine and the spruce do not know that nowadays not just any tree is considered adequate for the all-so-important task of developing seeds with only the finest trees chosen. Later, they are grafted and cultivated in plantations – in special seed orchards in order to develop seeds with the traits of their mighty predecessors – fast-growing and high quality. Such exemplary individuals grow only in seed plantations, in special ground, from the best clones and seedlings.

LVM for seed production manages a total of 580 ha pine, 150 ha spruce and 15 ha other, unnamed species. On these plantations comes selective reproductive material that falls into the category “improved”. The result from the sub-plantation for pine seeds falls into the category “superior”. And at Kalsnava, you can see something extraordinary – birches growing in plastic tarp-covered greenhouses – the first such plantation in the Baltic States for breeding birch seeds. You are probably wondering, why a greenhouse? To eliminate any chance of even the smallest speck of pollen from an “average cousin” reaching the shoots of the specially-cultivated royal birch.



For the untrained eye, a seed is a seed – they are all the same, right? Why such attention to quality? Scientists have proven that properly-grown plants from seed plantations bring about a forest more stately, abundant and durable. The economic advantages are clear – bigger wood production volume by one-fourth. It cannot be denied, however, how pleasant it is to gaze at a vigorous new forest stand, where each and every tree is a robust prize.

- * Research conducted by Latvian scientists shows that in cultivating a selectively-bred forest, harvest time comes 15 years faster.
- * Tree felling from 1 hectare will result in 80 cubic-meters more than from a natural forest (in terms of money, about € 1,400).
- * The logs from a plantation will be 40% larger than from a forest grown without selective seeds.

Selective breeding, dealing with improved methods for tree plant productivity and timber production, began to develop internationally only in the early 20th century, while Latvia's most significant research and practical application came in the 1960s, and is connected to the achievement of the staff at “Silava”. The key methods in this field are selection of the best material and artificial cross breeding for fast-growing, top quality trees.

Odd children of the witch's broom. Ornamental seedlings



The breeding of ornamental or decorative trees pursues different principles altogether: the main objective is to grow trees and shrubs with shapes as unusual as possible. Although ornamental seedlings account for just 3% of the total output of LVM tree nurseries, they are the subject of multiple inquiries as the total range of ornamental seedlings includes more than 600 varieties. Any person who has a garden, however small, dreams of planting the splendors seen at the tree nurseries in their entirety, or at least the better part thereof. The more unusual a shrub or tree, the more coveted and wonderful it appears to be, even to those who do not have a garden yet.

So how are the unusual trees and shrubs multiplied, and how do we arrive at new varieties?

There are several ways to expand a collection. Free international exchange of seeds is popular, where Kalsnava Arboretum and other botanical gardens and arboreta that produce ornamental seedlings also participate by presenting annual lists of collected seeds, or Index Seminum. Receiving a small pack of seeds from a faraway country and waiting to see if the new acquisition will want to grow can be quite exciting. But please, do not be misled into believing that it is as simple as planting the seeds you have received and waiting for the harvest. Not at all! Dendrologists have many stories to tell about how new varieties acclimatize in Latvia, especially in Kalsnava in Latvia's north. For instance, false cypress 'Dzintra' is supposed to have yellow needles, but the result is not even close to what was expected! And next winter it turns out that the yellow ones do not want to stay in Kalsnava's harsh climate. The process of selection of a few yellow false cypresses, which become the parents of a grove of yellow cypresses, takes several years of scrupulous work. Nearly every new acquisition has an equally eventful biography, according to the creators of new ornamental trees and shrubs.

It is no less intriguing to make seed parcels for others, hoping that a tree or shrub seed grown in Latvia will take root in some exotic country.

Yet another way to acquire an unusual conifer is to graft a particularly-shaped shoot. From April to May, arborists climb trees to collect oddly-shaped conifer scions. Over the past five years, more than 150 various conifer mutant shapes have been collected. The scions are grafted onto stock trees to create new ornamental conifer varieties and shapes. For example, children of the Ventspils roadside witch's broom, born in Kalsnava, were recently made available to the public.

And one of the most interesting moments is how the graft shoots are obtained. Professional arborists – members of a rare profession – climb high trees, dexterous as a cat, to cut shoots from witch's brooms. In conifers, witch's brooms are not a disease but a genetic deviation as a result of the development of buds. Dendrologists then take over to create a new variety of a conifer, which takes several years.



Green, pink, grey and brown. Cones



Cones are exceptionally beautiful. Scaly and smooth, green, grey, brown, pink and bright-red, large and small, round and elongated – cones may be vastly different. Anyone holding a cone will always wonder, how such great trees can grow from such small seeds. Indeed, the famed pines of Zauska, Allas and Kaķi, and all other stately trees have all grown from tiny seeds.

So what are cones, actually? Encyclopedias state that a cone consists of the seeds of a gymnosperm held by overlapping scales attached to the cone stem. On the average, a pine cone holds 25 seeds, whereas a spruce cone contains 150 seeds. But it takes a while to get to the seeds!

Spruces and pines are quite capricious ladies in terms of cone harvest. There is certain cyclical pattern in pine and spruce blossoming that depends on meteorological and ecological conditions – a pine tree blossoms richly every three to four years, whereas a spruce – every four to seven years. In spruces, cones are mature already in the blossoming year, whereas in pine trees – one year after blossoming. Once the seeds in a cone are ripened, cone harvesting may begin. In order to ensure better quality of seeds, cones are mostly picked in special plantations of seed trees, where they are lower height for cone-pickers' convenience. Cones are picked by hand, not much machinery is involved, unless a boom lift is necessary.

Heated, dried and de-winged. Cone dryers

A long time ago, people found a way to extract a small amount of seeds from cones by drying them in kilns or on stoves, but cone seed extraction began in earnest in Latvia after the 1850s when the reforestation process had begun. The first cone dryer was built in Engure, whereas Vijciems cone dryer, which is still in operation and in which we take great pride, was built in 1895. In the 1960s, there were 45 cone dryers in Latvia, but many of these were rather primitive. Two new up-to-date cone dryers, run from an operator's station, were built in the 1990s in Jaunkalsnava and Renda, which still account for the largest part of seed extraction operations.

Cone dryers must operate in such a way as to ensure that the drying proceeds quickly, without impairing germination capacity or causing mechanical damage to the seeds. First and foremost, cone dryers must provide dry and warm airflow, heated up to 60 degrees Celsius. Spruce cones open up and spill the seeds the fastest, whereas pine cones are much more stubborn and will not give their small seeds; sometimes the entire procedure needs to be repeated – the cones are moistened and dried again, until they finally give up and spill the seeds.

Further processing and storage of the seeds, which involves latest technologies, takes place at the forest seed center of Kalsnava Seed Growing Station, where the seeds from cone dryers are taken proper care of.

The modern Kalsnava cone dryer

Kalsnava cone dryer, located in the LVM office building in Jaunkalsnava, is a modern container-type dryer that, thanks to high-precision and low-impact technology, produces top quality seeds. Everything is automated and nothing is left to chance here. Seed extraction in Kalsnava is run from an operator's station. Here, cones are dried, seeds are separated, de-winged, winnowed, dried, calibrated, until high-quality seeds are obtained that will be stored in a refrigerator, so there are enough seeds for years when the harvest is poor. In years of fruitful harvest, 700 kilograms of pine and 600 kilograms of spruce seeds are produced in Kalsnava.

Living history. Vijciems cone dryer

Vijciems cone dryer, built in 1895, has by now become a historic monument because here seeds are still produced by equipment and technologies that are more than one hundred years old. In 2002, Vijciems cone dryer was named a European cultural heritage site, whereas in 2008, the moniker "unusual" was added to its status.

In Vijciems cone dryer, seeds are extracted from cones in a way that is completely different from that in Kalsnava; here, everything is done just as it was done a hundred years ago, using the original drying equipment. Once cones are brought to Vijciems, they are poured into sacks, then they are attached to chains and pulled through a hatch to the third floor. There cones are poured into four drying cylinders that need to be turned several times a day so all cones dry evenly. This century-old machinery is a source of genuine admiration to visitors who are allowed to take part in the cone-drying process.



- * One hectoliter (10 buckets) of cones produces 500 to 650 grams of pine seeds or 600 to 1,100 grams of spruce seeds.
- * 350 to 400 grams of seeds is enough to produce seedlings for planting 1 ha of forest.
- * 1 kilogram equals 100,000 to 120,000 germinating pine seeds.
- * 3,000 pine seedlings or 2,500 spruce seedlings are necessary to plant 1 ha of forest.

In a tree school. Nurseries



During the Soviet period, there were almost twenty tree nurseries in Latvia – also called tree schools, and the process of planting trees was considered to be teaching and re-teaching of trees. Originally it was believed that there were enough seedlings, but soon it became apparent that, in practice, this was not so. The equipment was obsolete – what was once modern technology was no longer applicable in the 21st century. That is why it was decided in 2000 to combine several nurseries and seed orchards into a special structural unit specializing in making material for forest reproduction.

At the moment, there are nine LVM tree nurseries producing seedlings that can ensure complete regeneration of deforested areas. Silviculturists in neighbor countries also have a high opinion of Latvia-grown seedlings. Over the past few years, “LVM Seeds and Plants” has sold more than 48 million seedlings of conifers and deciduous plants. 140 people care for the seedlings on a daily basis, whereas during the high season, the figure triples.

The three largest nurseries – Strenči, “Podiņi” and “Mazsili” – use the container seedling technology. Also, in order to improve quality, production is being modernized at other nurseries, too, which produce classic bare-root seedlings – albeit, now with an improved root system.

Nurseries and seedling plants also sell ornamental tree and shrub seedlings: conifers, various maples, rowans, lilacs, magnolias, roses, barberries, cinquefoils, spiraea. Conifers have scions that are adapted to Latvia’s climate, they are of unusual colors and shapes, which are not passed on by seeds, but come as an advantage of grafted plants.

An arborist is a professional who performs planting, nurturing, trimming crowns, and cutting trees and shrubs in public and individual groves. Arborists remove trees that pose threat to buildings, power lines and other facilities and, thanks to possessing a wealth of knowledge about trees and shrubs, know what technologies and agro-technical measures need to be employed in tree planting and care, plus they know how to work at heights.

Starting from January 2008, the profession may be learned at Ērgļi Vocational School.

Container seedlings

50% of all seedlings available from LVM are grown in special containers or cassettes. Of forest plants, it is pines, spruces, birches and black alders that are grown in containers. This system has enormous advantages – it makes it possible for customers to buy seedlings all season long and makes transporting much easier. Thanks to this technology, seedlings can be planted at any time, precluding the main risk – that the plants may wither, and the seedlings are not subject to the stress as they are moved from their usual environment to a new location. The roots are not damaged, and the seedlings feel much better in their new home, where they take root and begin to steadily grow.

Imagine a tiny seed beginning its life in a forest. Here, nothing can be taken for granted: everything depends on how far the wind takes the seed, the quality of soil where the seed lands, the level of moisture necessary for the seed to germinate and grow into a mighty tree.

Seeds that end up in tree nurseries is a different story altogether. Here, nothing is left to chance; this is a production process that is well thought-out, automated and robotized. First, the cassettes with vent holes in the sides, which ensure that the roots grow vertically as they should, are automatically filled with peat substrata saturated with slow-dissolving mineral fertilizers, and at the same time one seed is inserted in each cassette. Then the cassettes arrive in greenhouses. But these greenhouses are not the usual kind of a hothouse, they automatically ensure the most ideal conditions for the germination of seeds in being the optimum environment in terms of temperature and humidity, dosage of acidity and nutritional substances, keeping out pests and diseases.

Container seedlings are seedlings with enclosed, vertically-oriented and compact root system, placed in peat substrata. The volume of the roots is proportionate to the shoot, ensuring optimum nutritional conditions for the plant. When transporting or planting the seedling, the container protects the roots from drying and damage, and it also ensures the necessary nutritional substances for the plant during the first year.



However, the seeds spend just one month in these conditions, after which they are moved to open fields. But fear not, there are qualified specialists who continue to care for the small seedlings, plus there is an efficient watering system with dosage meters to deliver water and nutritional substances dissolved therein – mostly nitrogen compounds – to ensure the growth of the green mass. One such system waters up to 200,000 seedlings, ensuring ever-precise humidity and delivery of all the necessary nutritional substances to every container seedling. And the plants are grateful for this, because seedlings planted in open ground take up the nutritional substances themselves via roots, but the proportions thereof are often ill-suited for the seedling, impeding its growth and development.

And what happens in the greenhouses? No, they do not stay empty – another two or three batches of the small seedlings germinate here every season.



Long nights

We have to confess that the long night technology is, in a way, about deceiving the seedlings. One-year pine seedlings are known to stop growing for two weeks in the middle of summer, and resume growth with new strength in the autumn. This principle is used in the long night technology: a special dark cloth is placed over pine seedlings at 5 p.m. every evening for three weeks in a row during the summer to imitate the arrival of the autumn. The small, confused pine tree starts to believe that the autumn is near and rushes to grow, and at one year of age looks just like a two-year pine. Moreover, such pine seedlings look like an emperor's guard of honor – all of one height. In practice, a one-year pine grown employing the long night technology is impossible to tell from a two-year old, except that the latter may look a little more mature, with better developed root neck, but all of that befits someone who has lived twice as long in this world.

But this is not where the adventures end for the seedlings. In the late autumn, they are moved from the open field to... a refrigerator. This is actually a huge freezer where, packaged in cardboard boxes, the seedlings wait for the spring at a temperature of minus 4 degrees Celsius, when they finally will be permanently planted in a place where they will grow into magnificent and beautiful trees.

Seedlings in test tubes. Fast-growing aspens

Researchers have found that fast-growing aspen – and the hybrid of the fast-growing aspen and quaking aspen in particular – is in for a great future. The fragile meristematic seedlings become adult trees twice as fast as other aspens in the forest – they are fully grown-up already at twenty. The trendy new aspen has a variety of uses: pulpwood, timber, firewood. And on top of that: one seedling can grow into a tree with an entire clonal colony.

But the most interesting part is how fast-growing aspen seedlings are obtained. In Kalsnava, seedlings of fast-growing aspens are obtained *in vitro* from select clones in sterile laboratories, whereas soil is replaced by a special jelly-like feed in test tubes.

Once the tiny shoots have grown a bit taller in the sterile environment, they are moved to mist chambers to start growing roots in ideal humidity and temperature levels. In just two to three weeks, the seedlings have proper roots and may be planted in larger cassettes, which are placed in unheated greenhouses. The seedlings grow by the hour, and soon enough they may be moved to open fields. Here they continue to receive as much as before – the seedlings are fed and watered, while pests and diseases are kept at bay.

In the autumn, the young aspens are ready to move to their new residence. Maybe they are destined to help reforestation on some fertile soil, or maybe they will be part of a new fast-growing aspen plantation. One last stop is to bid farewell to the nursery teachers, especially the immensely-patient Aspen girls who spend entire days not in the field but in a sterile laboratory.



A close-up photograph of a vibrant red flower petal, likely a geranium, covered in numerous small, glistening water droplets. The background is dark, making the bright red color of the petal stand out. The lighting highlights the texture of the petal and the individual droplets.

A world full of flowers

Kalsnava Arboretum

About gardeners, they say in Latvia: wherever he goes, all starts to bloom. But to truly realize this, you have to visit the Kalsnava Arboretum.

Be not confused by the various terms that all go back to one word – arbum in Latin and dendron in Greek both stand for tree. Therefore, both an arboretum and a dendrarium deal with trees and the great variety thereof.



In order to preserve the richest scientifically-documented plantations of wooded plants in eastern Latvia, dendrological plantations known as Kalsnava Arboretum have been designated a protected area. However, Kalsnava Arboretum differs significantly from the protected areas and manor parks in Latvia as we know them, because the development of the arboretum is not over, it is here where attempts to grow trees from foreign lands beyond their natural habitats continue, and intensive breeding and selection work takes place.

Compared to the great trees, Kalsnava Arboretum is young. The establishment of the arboretum began in 1975 with the aim to conduct scientific research in dendrology and forestry and in order to obtain new reproductive material by planting foreign wooded plants here that were expected to adapt well to the local climate.

During this short period of time, much has been achieved. The collection of wooded plants is of a great scientific, economic and educational importance. And of course, a walk in the arboretum means quality recreation in a beautiful place that is constantly tended by experts – be it a visit to the romantic pond where pink and yellow water lilies bloom, or a stroll in a grove where a picnic is a possibility at a wooden table and benches, or climbing atop an observation tower that affords a view of the entire richness of the arboretum.

- * **Arboretum** – a collection of trees, shrubs and vines, where lengthy research is conducted to study the development of trees, how they fare in a given climate, how they produce seeds, and how they reproduce
- * **Dendrarium** – a collection of trees and shrubs grown outdoors
- * **Dendrology** – a branch of botany that studies wooded plants
- * **Taxonomy** – system of classification of plants, naming of cultivars

Before visiting Kalsnava Arboretum, it is definitely worth it to arrange a tour with a guide-dendrologist. A plain stroll means failure to notice a lot of interesting things, for example, that the bark of the Amur cork tree is soft, that pine needles may be gentle and fluffy to the touch, that the white dogwood has pink branches, that edible honeysuckle acts hastily – blooming in May with fruit already around the Ligo holiday, that wild garlic – notoriously tough to grow – has produced hundreds of offspring in Kalsnava Arboretum. Not knowing where to look, you will hardly notice that cone grandmothers and teens live along in mountain pine ‘Mops’, whereas the spruce has, besides the pinkish female flowers, a few dark-red male flowers – which means there will be cones.

And how will you find out the witty plant names if not from the guide? Here is wild pear ‘Ballerina’, dressed in a white tutu of flowers – albeit with red berries, there you can see the juniper ‘Grey Owl’ waving its grey branches, and over there is the larch ‘Blue Rabbit’, flapping its long ears in the wind.

Here you will find inspiration for new gardening ideas, see what a small garden will look like once it reaches a respectable age, and seek professional advice.

There is also a labyrinth, laid out in a pattern of Latvian traditional designs, made up of thujas in two different colors. The thujas are still small and getting lost in the labyrinth may take a lifetime, but in the future – who knows?

There is also a respectable collection of clinging vines in Kalsnava, as well as extraordinary rarities, such as a pipevine, tulip tree, white fringetree. If you happen to see a fringetree blossom, you will know what it means to witness a real bloomin’ blizzard.

Needles: blue, yellow and white

Coniferous trees have to be green, right? But the variety of conifers’ colors and shapes at the arboretum is dazzling. Small wonder, given that over six hundred varieties of coniferous trees grow here. Besides the usual green needles, some trees have lettuce-green, dandelion-yellow and sky-blue needles, whereas Korean fir – chalk-white needles below. The top half, though, is so vividly green that it may resemble a velvety carpet, especially so in the ‘Greencarpet’ variety, which looks exactly as the name suggests – like a green carpet. Experts may say fancy words when contemplating conifers, such as:

- Larches, firs and pines have strobili. But we can safely say:

- Pines bloom, oh, so prettily!

The shapes of coniferous trees are also a source of never-ending surprises. A spruce may resemble a huge ball, a horsehead or a big dog with floppy ears, a bird’s nest spruce looks like a king-size bowl the wrong side up. Whereas *Thuja occidentalis* ‘Filiformis’ has long thread-like drooping branches, much like shoestrings.

Here you can also see snake spruces, which were in the limelight in 2013, being awarded the title of “Tree of the Year” as 2013 was the Year of the Snake. Snake spruce, however, is not a spruce variety but an oddly shaped common European spruce with the branches resembling snakes. If you are watchful enough, you may spot a snake spruce growing in other forests too.



What color is lilac?

Kalsnava Arboretum is a garden where something blossoms all year round. Truly, even in October or February, when witch-hazel starts to flower. But the spring is, of course, the peak time of blossom craze. This is when people wander through Kalsnava Arboretum to drink in the sweet fragrances, slightly dizzied by the bright colors and tree shapes that are unusual for Latvia.

When lilacs bloom, there is a cloud of bitter fragrance over Kalsnava, it may seem that all 104 lilac varieties are in competition, including their more southerly neighbors in Dobeles. But there is no need for beauty to compete with fairness, besides, it is the northern head-turners that bloom in Kalsnava: 'Kalsnavas nakts', 'Gaiziņš', 'Krasavica Moskvi'. Lilacs are experts in play on color! 'Sensation' prefers the light-purple tone, but then apparently changes its mind at one point, and adds a tint of dark purple for the contours of the flowers. Other lilacs are changeable – they have pink buds when they begin to bloom, and white flowers at the finale. Go figure, with games like these!

Once rhododendrons and magnolias start to bloom, the arboretum is filled with intoxicatingly sweet aromas. And next comes the summery fragrance of peonies. Indeed, something is always blooming and emanating irresistible scents in this unique place.

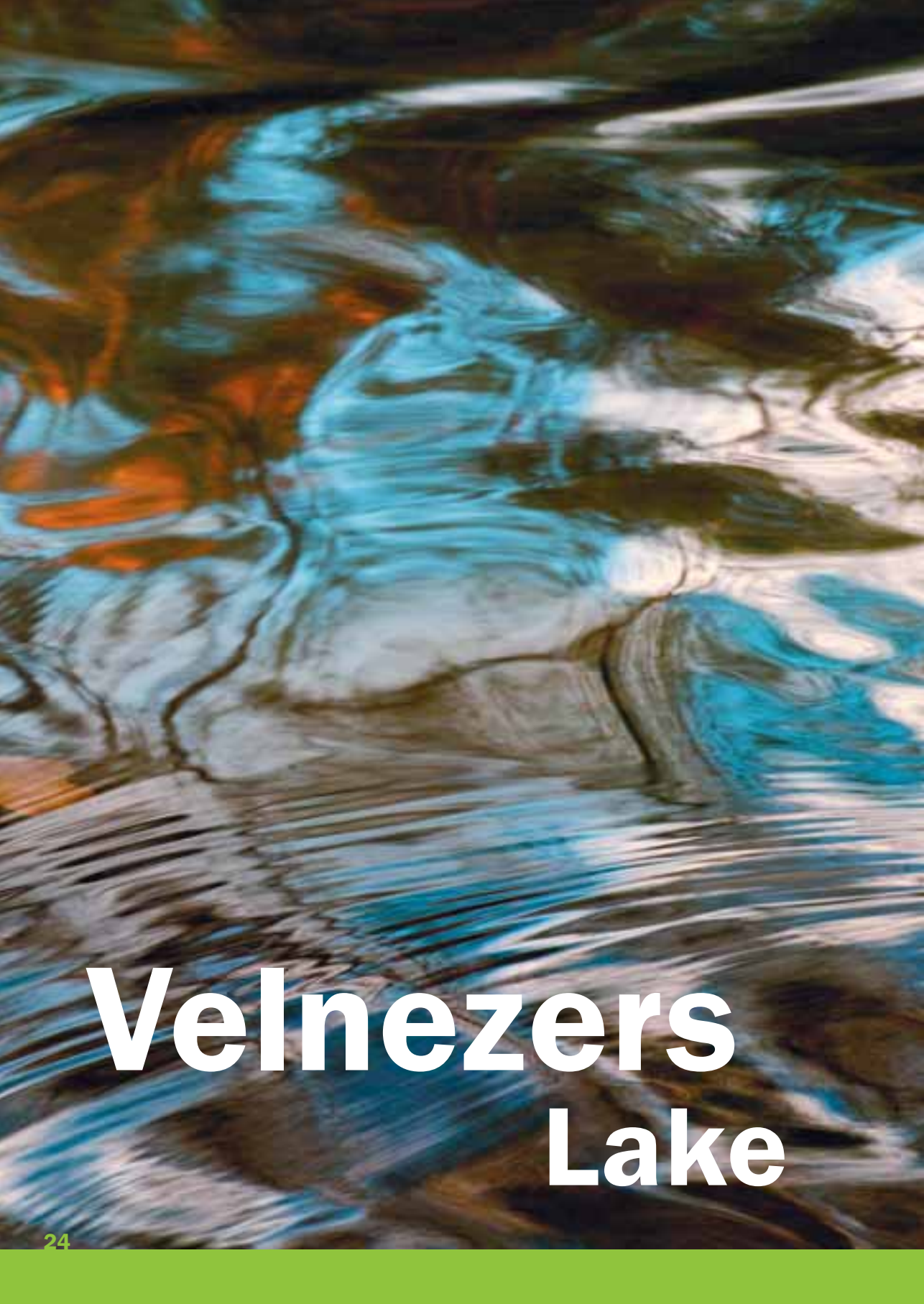
Peonies' celebration

When peonies start to bloom, people from all over Latvia travel to Kalsnava to revel in the unusual harmony of colors, shapes and scents. And there is so much to see here during this period! Kalsnava Arboretum's collection now includes 164 permanent peony varieties. Especially prominent are the dark-red 'Red Grace', white 'Solveiga', salmon-pink 'Coral Sharm', the fragile 'Chocolate Soldier' and much, much more. Some of the specimens are in the unique yellow color, for instance, 'Bartzella', and there are the white beauties with yellow centers. Of course, the collection of yellow peonies is not yet as large as that of the so-called Father of the Peony Garden, the outstanding plant breeder Aldonis Vēriņš, but in time it will be. Some of the seedlings have come from the Vēriņš collection, others have travelled from the University of Latvia's Botanical Garden in Salaspils, yet others – from the Netherlands, America and Denmark. Every year, a new peony beauty settles in Kalsnava for good.

The period when peonies were not allowed to bloom, so the rhizome would have more strength to grow and develop, is also over. There are no obstacles to the peony bloom festival now. In the arboretum, any visitor can find a bright flower of peony, a flower immensely popular in Latvia, that he or she likes the most, and smell its unique scent – the scent of the brief summer of Latvia.



- * The total area of Kalsnava Arboretum is 143.96 ha, where trees and shrubs occupy an area of 99 ha.
- * The arboretum is home to 2,249 taxons (varieties): approximately 600 coniferous and 1,829 deciduous tree taxons.
- * In terms of taxon variety, Kalsnava Arboretum is the second largest collection of trees in Latvia and the largest in eastern Latvia. Kalsnava Arboretum may be considered the third botanical garden in Latvia.
- * Since 1981, Kalsnava Arboretum is part of the exchange of plant reproductive material among the botanical gardens across the world.



Velnezers Lake

Velnezers (Velnezers Lake)



Aglonas novads
Grāveru sils

Rīga – 250 km
Aglona – 12 km



In 1977, a special conservation area was created in Krāslava Region's Šķeltova County called "Čertoka ezers" (Velnezers). The highlight of the 53 hectare large conservation area is the unique Čertoka Lake, also known as Valnezers or Velnezers (Devils' Lake), as well as the area's pine forests and picturesque hills. The conservation area also includes several small marshy areas around the lake. The flora and fauna in the conservation area has been carefully studied, and the conclusion drawn that the area has a rather meager number of species inhabiting it. Thus, the protection of the eco-system around the lake is the main goal of the conservation area.



An emerald-green beauty

Driving from Aglona to Krāslava, the road passes through a national conservation area, where Velnezers (Devil's Lake), or as locals called it Čertoks, is located. The lake, with its many legends, greets visitors with its mysterious emerald-green water, known to change also into turquoise or any other color of the rainbow at times.

The surface area of Velnezers is only 1.9 hectares, but it is very deep – 18 meters in some places. The lake's water is crystal clear, which is a bit uncommon. It is possible to peer eight meters into the water at times. The water's taste is also uncommon, as it is a bit sweet. Some say that the lake does not even have a bottom, and that it was originally created by a meteor, or something else from the sky. Myths about the lake are enhanced by the fact that it does not have many water-plants, or hold many fish. It is rare to see anglers trying their luck here.

On the southern part of the lake there used to be a field, where horses were taken out to pasture. The field included a small lowland area, which had a pit the size of a bed in its middle. This pit was known as Devil's Bed. Local boys had been known to make bets on who could spend the whole night sleeping in the pit, but no one was able to do so. As soon as they fell asleep, the boys either woke up in a different part of the field or nearby. It is though the Devil himself kicked the boys out of his bed.

Inhabiting the Grāvers pine forest, which surrounds the lake, are several unique plant species, like the dianthus or sand-pink flower, the pulsatilla patens or prairie-crocus, the Baltic orchid, and the Lesser butterfly-orchid with a beautiful aroma. The lake is accessible from any point, and there is a path which goes around the lake. However, when walking around the lake, there is another oddity – the view of the opposite side, with pine and birch trees all around, is almost identical from wherever you stand.

The lake itself is extraordinarily quiet, as birds are not frequent visitors of the surrounding trees. People have also never lived near Velnezers, as it is difficult to spend a longer period of time near the lake – there is some sort of magnetic current in the surrounding area, which makes people uncomfortable and disoriented.

It has been heard that “out-of-towners”, who finally make the trip up to the magical lake, feel a bit disappointed when they get there – the beauty of the surrounding area is undeniable, but they cannot brush off the feeling of being unwanted guests. Visitors usually have no desire to be noisy or even take a swim in the lake, but just take a peaceful walk to take in the surroundings. This is probably how the lake tries to protect itself and its secrets!

For more active recreation, just a few hundred meters away, is Jazinka Lake, where it is possible to go fishing and take a swim. A special recreation area has been set up lakeside, where you can light a campfire and relax, at the same time pondering the mysteries of the other nearby lake.





LATVIA'S STATE FORESTS -
OPEN DAILY, NO ENTRANCE FEE

OWLINATOR

PRODUCER: LATVIA'S STATE FORESTS DIRECTOR: MAMMADABA
STARRING: EAGLE-OWL AND NIGHT ANIMALS
SOUND: NIGHT SILENCE LIGHTS: MOON & STARS DRESS DESIGN: MAMMADABA



WWW.MAMMADABA.LV





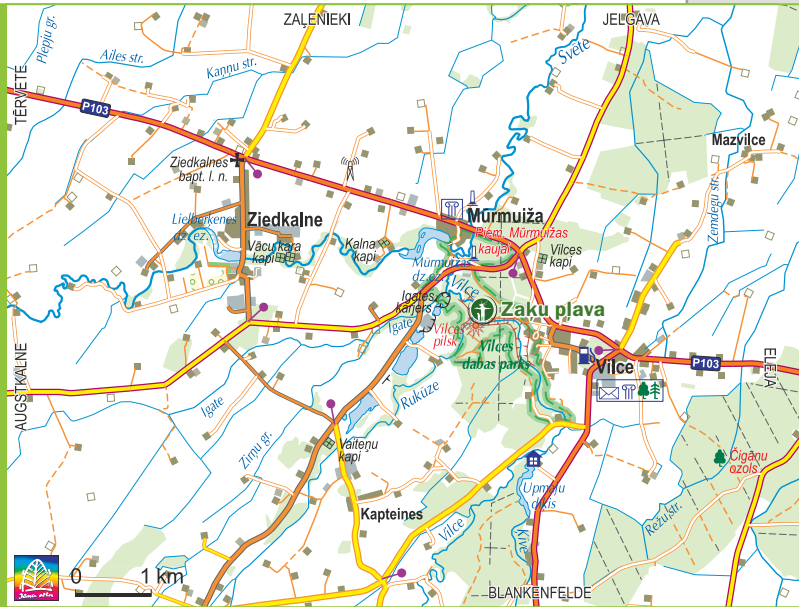
Rabbit Field

Zaķu pļava (Rabbit Field)



Vilces pagasts
Jelgavas novads

Rīga – 80 km
Jelgava – 35 km



Zemgale Province, the breadbasket of Latvia, is known for its endless plains and fertile fields, especially in Jelgava Region. However, in the border-area with Lithuania, between Eleja and Tērvete, natural landscapes untypical of Zemgale Province can be found – rocky river valleys, ravines and small hills.

In the Zemgale lowlands, between Vilce and Mūrmuiža in the Vilce River valley, a special European conservation area was created in 2004 called “Vilce”, which takes up an area of 114 hectares. The nature park, with its stunning scenery, has also been included in the EU’s network of endangered landscapes – “Natura 2000”.

The nature park includes such sights as: Vilce Manor and Park, Vilce Castle Mound, and Vilce Ravine with its unique plant species, a stone bridge, an ancient graveyard and battlefields.

The picturesque Vilce and Rukūze rivers pass through the park. The park’s steep hills also include several unique habitats and plant species that are protected in Latvia and Europe. The park’s forests and fields also include such rare plant species as the Wolly Buttercup and St. John’s Wort. In the deep Rukūze River Valley, there are several overfalls. On the left side of the river, at the base of Vilce Castle Mound, there are several small sandstone outcrops – quite rare for Zemgale Province.

The most visited spot at the nature park is Zaķu pļava (Rabbit Field) and Vilces pilskalns (Vilce Castle Mound). For the convenience of visitors, the park includes information stands, specially constructed steps and bridges, as well as viewing platforms.



Vilce County

In the southern part of Jelgava Region, right on the border with Lithuania, is Vilce County, which can boast of a heroic historical past. Mūrmuiža Manor (Gemauerthof) is mentioned in historical archives as far back as 1590. In 1705, during the Great Northern War, on the banks of the Svēte River, the Battle of Mūrmuiža took place, where a Swedish army of 7,000 soldiers defeated a Russian army of 20,000. In 1935, the Latvian government allowed the Swedes to erect a special memorial honoring the Battle of Mūrmuiža, which includes a plaque in Latvian and Swedish with the following written: "On July 16, 1705, at this spot, an army led by Swedish General Adam Ludwig Lewenhaupt defeated a much larger force". In 1991, on the left side of the Svēte River, at the gravesite of the fallen Swedish soldiers, a memorial was erected. The area itself went through a period of substantial development starting around 1822. In 1893, Vilce joined with other surrounding residential areas, and after implementing a string of reforms, became the third largest county in Jelgava Region.



Vilce is a truly a stunning place in the lowlands of Zemgale. The local network of smaller and larger rivers – Ķīve, Platone, Rukūze, Sidrabe, Svēte and Vilce, all intertwine and flow into one another here, while the main architectural entity – Vilce Manor, is the area's central landmark. Vilce Manor was constructed by order of Baron von Medem in the 18th century, but went through substantial reconstruction in the 19th century when a second-floor was built. The entrance door of Vilce Manor, which is in the Baroque style, is decorated with the Medem-Kaizlinger coat of arms. The manor has been created symmetrically with the complex's other buildings – dry-house, barn and forge, which remain

to this day. The manor's lovely park was created in the mid 19th century.

In the manor complex's Hunter Lodge, the voices of children can be heard on a daily basis, as this building now houses Vilce Elementary School. The first mention of a school in the area was in 1819, when the lord of the manor established classes for local children, where they learned to read, write, calculate, and attended parochial classes. Times changed, but attention was still paid to education. In 1937, Latvian President Kārlis Ulmanis even planted an oak tree outside the school, which has grown into a majestic tree and is now 2.13 meters in circumference.

Vilce Manor has been lucky, as no one has forgotten it. Just the opposite – the historical building has much life, and the local school children make sure that the surrounding area and footpaths that lead to the local nature sites are clean and in proper order. In the vicinity of the manor, the footpaths take visitors to Vilce Castle Mound, Vilce River Valley, Rabbit Field, Love Hill (Mīlestības kalniņš) and the Lady's Spring (Lielmātes avots).

Baron Wilhelm von Hahn had been unfaithful to Baroness Ida, as he had been secretly meeting with the daughter of the manor's gardener Mr. Riekstiņš. After finding out about this, the baroness began to weep uncontrollably, and it is believed her tears created the Lady's Spring. Meanwhile, gardener Riekstiņš became an active supporter and participant of the 1905 revolution, and even printed leaflets in Vilce.

Devil's Ravine

Right behind the school is the manor's park, where Devil's Ravine (Velna grava) is located with its many legends. Devil's Ravine is located amongst a forested area of large trees, on the left side of the Vilce River. At the ravine, it is easy to see why there are stories of dark shadows over it. About 100 meters from the Vilce River, crossing right over Devil's Ravine, is the Devil's Bridge (Velna tiltiņš), which is also known as the Baron's Bridge (Barona tiltiņš).

Once upon a time, the Devil was walking along the Vilce River, carrying a bag of stones. Suddenly, he heard a rooster crow, which scared him and he dropped the bag of stones, which later become known as the Devil's Ravine.

Vilce Nature Path

The romantic Vilce Nature Path (Vilces dabastaka) takes visitors on a stroll through all of the key sights between Vilce Manor and Vilce Ravine, where supposedly the first spring anemones in Latvia bloom. Here it is possible to enjoy the refreshing spring water from Lady's Spring and reminisce about the various local tales. Further on, the path merges onto the Baron's Path (Barona taka), where the former barons of Vilce Manor took long walks. The stands on the path also include information on animal species that inhabit the area. The path eventually leads visitors to the castle mound, where the Vilce and Rukūze rivers converge, where the unique sandstone outcrops can also be seen. The flow of the two rivers is quite strong, and is nothing like the gentle and slow-moving rivers common in Zemgale Province. As many rivers in Zemgale, the Vilce River also begins in Lithuania, with only the final 15 kilometers located in Latvian territory. Furthermore, the river features sandstones and dolomite-sandstones, which is atypical of rivers in Zemgale.

Vilce Castle Mound

In the Vilce River Valley, the 12-meter-high Vilce Castle Mound still stands proudly. The area was inhabited by local tribes during the Iron Age between the 5th to 9th centuries. The castle mound and the surrounding area have been arranged for the convenience of visitors, and there is even a viewing platform on the castle mound for a breathtaking view of the Vilce River and the surrounding valley. According to ancient legend, the Vilce Castle Mound was never captured, and the local Semigallian tribes deliberately abandoned the castle by burning it to the ground, so that the Crusaders would not be able to capture it.

Rabbit Field

Zaķu pļava (Rabbit Field) is a popular tourist sight, from where it is possible to see the Vilce Castle Mound, stroll the local nature paths, as well as cross the newly-constructed pedestrian bridge over the Vilce River. From here, it is possible to see the unique sandstone outcrops from the left side of the Rukūze River. There is also a recreation area at Zaķu pļava, right across from the castle mound, where there are picnic tables, benches, a swing-set and a campfire area. There is also a special zone for tents, thus Rabbit Field can be used for overnight hiking trips. This area is closely watched over by an impish wooden statue of a guard rabbit, the overseer of Rabbit Field.



On Easter morning, the daughters of the Lord of Vilce went to the Vilce River to wash their faces. On their return, they noticed a field full of rabbits, and called out: "Oh, my, this is a real field of rabbits". Hence the name.





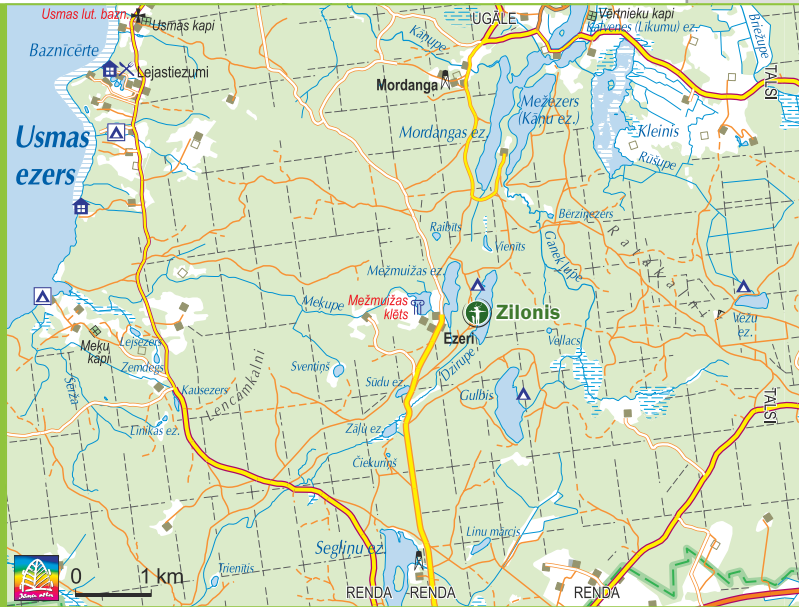
Elephant Lake

Zilona ezers (Elephant Lake)



Rendas pagasts
Kuldīgas novads

Rīga – 130 km
Sabile – 25 km
Kuldīga – 25 km



Renda County is located in an excellent geographical position – as one part of the county is made up of the picturesque Abava River Valley, while the majestic Lake Usma is located in another part of the county. Pine forests cover most of the county, with a relatively large number of lakes located in the northeast part of Renda County, of which the largest are: Segliņš Lake, Sluja and Mežmuiža lakes, as well as a lake oddly named Zilonis (Elephant Lake). Renda and the surrounding area hold quite a historical legacy, with much still preserved from the period when Duke Jacob ruled the region in the 1600's, when the area saw substantial industrial development. As part of the Duchy of Courland in the 17th century, Renda became a flourishing manufacturing center, where the wood-processing industry was developed, and the production of soaps, perfumes and phosphorus took place. Also constructed during this period was a glass factory, paper-mill, linen weaving mill, tar and lime kilns, as well as a large vineyard. On the right side of the Abava River Valley, in the middle of a beautiful park, is the Lielrenda Manor complex, which now houses the Renda Elementary School. Renda Evangelical Lutheran Church is located in the center of town built between 1750 and 1786. Right across from the church is the Īvande River, with its two rapids of 1.4 meters and two meters, as well as nine-meter wide waterfalls. North of the waterfalls, where the river flows into the Abava River, the Renda Castle Mound is located, while on the opposite side is an ancient burial site of the Baltic tribes that once walked these lands.



A lake called Elephant

The name Elephant Lake (Zilonis, Zilonītis) most likely derives from the original and harder to pronounce name Dzilons. Residents of Renda are very proud of the lake, as they see it having many of the symbolic characteristics of an elephant. Why a lake can't be called Elephant, which is such a beautiful animal symbolizing strength, longevity, intelligence and fertility. Furthermore, elephants love water, and their lives in the wild depend on being near water resources. They also not only drink water, but like to swim in it too, just like humans.

Thus it is clear that our elephant has much in common with the majestic creature of the wild. But, how does the Renda elephant look like? Beautiful, calm and clean. The surface area of Elephant Lake is 16.4 hectares, with an average depth of three-meters, and a max depth of five meters. Of course, the lake is small in comparison to the county's largest lake – Lake Usma, but the good time this lake has provided to many is undeniable. The lake itself has a long and flat surface, and is in no way similar to the form of an elephant. However, if you look closely, you might be able to see the form of an elephant's trunk. Elephant Lake is known for being a very clean lake, perfect for swimmers. Crayfish also enjoy the clean waters, and they have good places to hide too, as there are trees that have broken off into the water, which, at the same time, is a hindrance for fishermen. However, this has most certainly not scared them off, as the lake is rich in fish species, like roach, pike, perch, tench, which are known to grow into quite large sizes. All of this abundance of flora and fauna is being nursed with much love by Elephant Lake. Frisky beavers also inhabit the lake, and the lack of deciduous trees has made them change their menu, as the critters now like to munch on the nearby pine trees. But Elephant Lake has another unique feature – when weather conditions are calm, water-level sometimes rises and falls by four centimeters. Maybe this is how the Elephant breathes? The elephant of Renda is not lonely. Nearby, only several hundred meters away, is Mežmuiža Lake. On the banks of Mežmuiža Lake is a small village called, you guessed it – Lake Village (Ezeru ciems). And to make sure there is always some kind of activity by Elephant Lake, LVM has set up several recreation areas around the lake, where persons can relax after a swim, observe local fishermen in action, resting after a day out picking forest mushrooms or berries, or have a romantic picnic.



THRILLER

SAPŅU ĶĒRĀJS

LATVIA'S STATE FORESTS -
OPEN DAILY, NO ENTRANCE FEE

HE CATCHES WHAT WE
DO NOT DARE TO THINK

PRODUCER: **LATVIA'S STATE FORESTS** DIRECTOR: **MAMMADABA** STARRING: **GREAT ANTLER STAG**
SOUND: **NIGHT SILENCE** LIGHTS: **MOON & STARS** DRESS DESIGN: **MAMMADABA**



* DREAM CATCHER

WWW.MAMMADABA.LV

DABAS
STEREO



Berlin Intersection

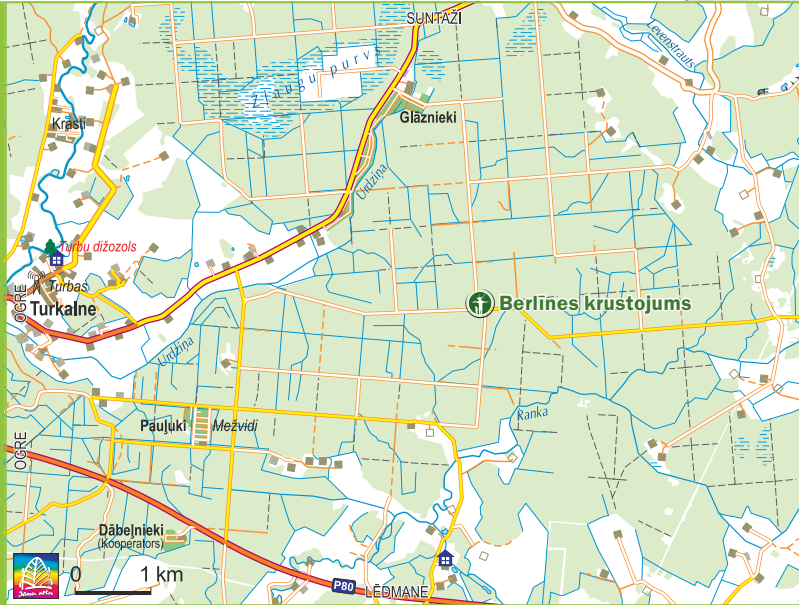
Berlīnes krustojums

(Berlin Intersection)



Suntažu pagasts
Ogres novads

Rīga – 48 km
Warsaw – 729 km
Berlin – 1,216 km



A driver, maybe one who is lost in his thoughts at that moment, could become confused when driving on the Ķegums–Sigulda road, halfway between Suntaži and Glāzšķūnis, when he suddenly sees a sign – Berlin Intersection (Berlīnes krustojums) – 7 km. “This cannot be right,” he thinks to himself, as he decides to drive the seven kilometers to investigate this peculiar place name. It is not possible to miss it. On the intersection, there is a striped post – just like in old movies – which usually makes drivers stop for a look. The sign on the post reads: Distance to Berlin – 1,216 km, Warsaw – 729 km, Riga – 48 km. Right next to the sign is a recreation area, with a table, benches and forests all around. A person would have to walk ten kilometers just to get to the other side of the forest. The place itself amazes with its feeling of being far away from anything else. Peace and tranquility in the middle of a lovely forest, where the only sound you hear are birds chirping away. And then people begin to wonder once again – how did it get such a peculiar name? What used to be here? It is not possible to receive answers to these questions by just stopping here for a moment. Local forestry management director – Jānis Grīslis, is still looking for the answers, and has been studying this unique area and its place name for several years. He has also come up with some possible explanations.



Secrets of the narrow gauge railway

Imagine it is 1935. A new 27-kilometer long narrow gauge railway has been built between Ogre and Laubere, and the train is about to stop at a small station in the middle of the forest, which is bringing lumberjacks from Riga via Ogre Station. The lumberjacks will go into the forest for a week, while the train will huff and puff its way back with a full load of lumber. Documents show that the Transportation Department's request to allocate 0.5 hectares of land to create a timber-yard at Ogre Station has been granted, and that there is a consistent flow of timber arriving at the station. The train is not short of work. The lumberjacks will remain here for a week, live at the barracks and wait till the end of the week for the train to pick them up. These are tough times, and it is good to have any kind of job.

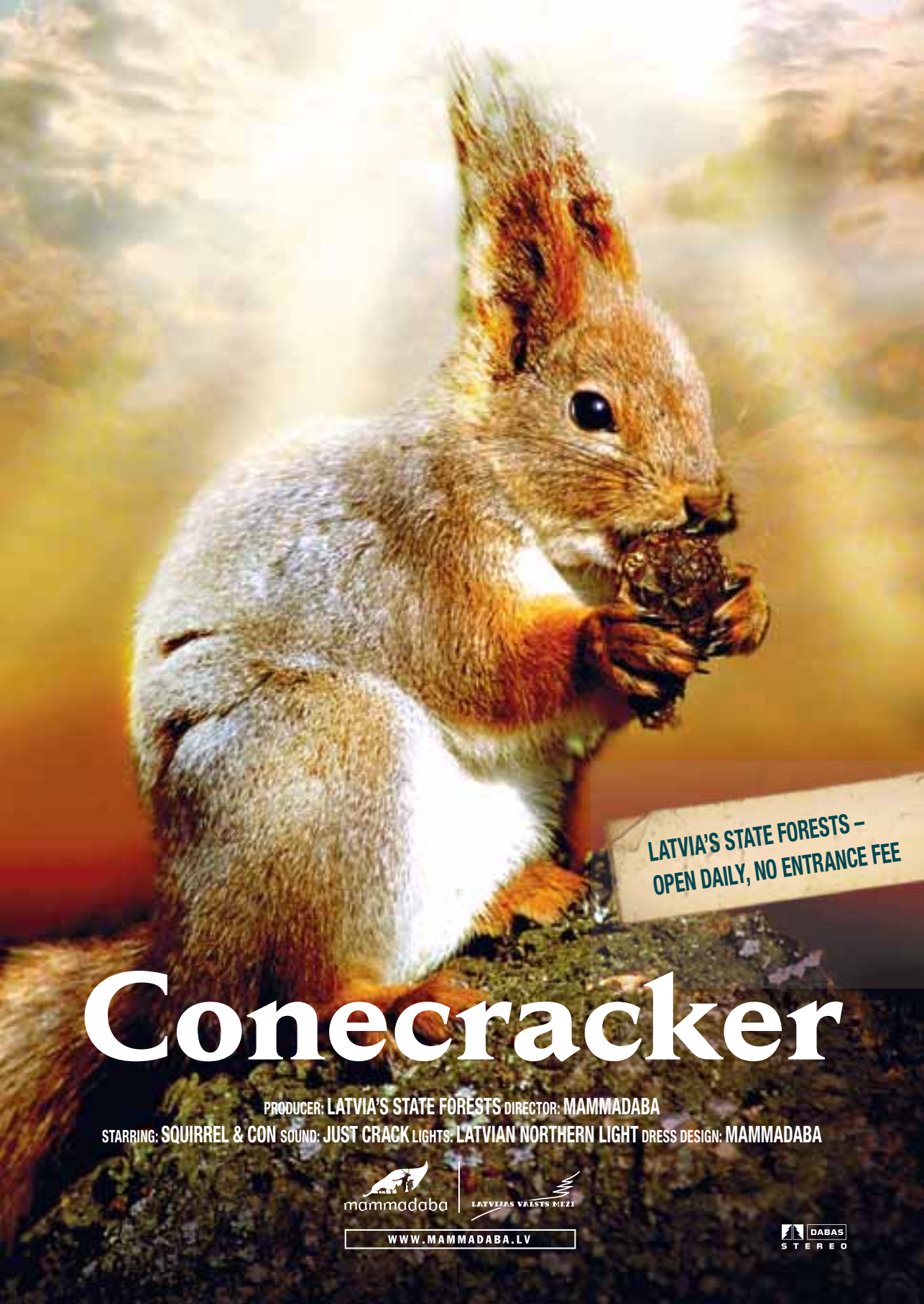
One of the narrow gauge train line's branches was called "Sibīrija" (Siberia). Also, it must be pointed out that even though the lumberjacks were glad to have a job and were paid relatively well, it was certainly not an easy one. The government at the time saw the timber industry as highly important, as one story has it that then Latvian President Kārlis Ulmanis planted an oak tree at one of the stations near Laubere, which stands tall and proud to this day with much love and care by the local schoolchildren. There was a time people only came to this area if they absolutely had to, as the roads were almost impassable. Between 2002 and 2003, LVM fixed up the roads in this area. Later, it turned out that one section of the road passes the old route of the narrow gauge railway. During the road works, a 60-cm wide piece of metal track was found, which had engraved on it the year 1909 and the text "Baltic Railroads".



But what to do with the names of the roads?

Many of these forest roads have original place names given to them which were found in old maps or other documents. Some were named after meetings with local residents, who talked about the history of the area. How great that old traditions are being observed, as these old place names make the forest feel closer, more understandable, and easier to walk through. In old maps from the first Latvian independence period, it was possible to find the old place names of the area, which indeed include Berlin Intersection. After this, it was only a matter of time before the recreation area was built at the spot of the old-fashioned road sign, where people can let their imagination run wild.

Thoughts begin to linger even further back in time, trying to imagine the active hustle and bustle of the area back in the day. In the not so distant past, near Cabin Road (Būdas ceļš), named after the cabins that used to be located there, horses were pulling a plough. The local field workers saw that the foot of one of the horses was bleeding and went to investigate the cause. And what did they find after a small dig? Various types of glass bottles with the name "Sundezel 1820" written on them. Thus, it can be concluded that a glass melting kiln was located nearby, which was used by the local manor to produce bottles. This means that a spirits distillery was also in operation to fill up the bottles. And not only – there was also a brickyard, a school and a general store, which means that at one time this area used to be full of life.



LATVIA'S STATE FORESTS –
OPEN DAILY, NO ENTRANCE FEE

Conecracker

PRODUCER: LATVIA'S STATE FORESTS DIRECTOR: MAMMADABA

STARRING: SQUIRREL & CON SOUND: JUST CRACK LIGHTS: LATVIAN NORTHERN LIGHT DRESS DESIGN: MAMMADABA



WWW.MAMMADABA.LV





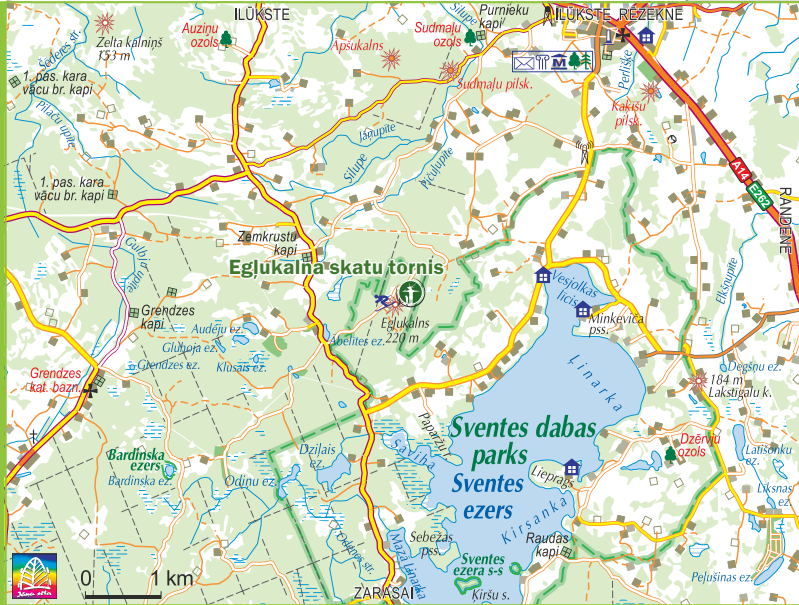
Highest peak of Augšzeme

Eglukalna skatu tornis (Eglukalns observation tower)



Daugavpils novads
Sventes pagasts

Rīga – 230 km
Daugavpils – 14 km
Ilūkste – 12 km



The natural surroundings in Latgale is an everlasting source of awe and admiration, with rivers, lakes, hills and forests arranged in breathtaking scenery interspersed with multiple church steeples. Such beauty is an incredible sight to behold! And the farther you can see, the better. For this to be possible, to help people get at least a bit closer to the clouds, three wooden observation towers have been built in particularly striking locales in Latgale: Priedaine observation tower at Krāslava, Ančupāni tower at Rēzekne and Eglukalns tower in Svente, not far from Daugavpils.

Once you have climbed one of these towers, you will be overwhelmed by an unusual feeling of freedom, like a bird in the sky. But you will surely refrain from flying away, seeing, once again, how beautiful our country is.

And do beware: do not look down, look ahead of you!



Svente County's riches

Picturesque Svente County lies in an excellent location – at the intersection of the Svente and Subate roads, not far from Latvia's second largest city of Daugavpils, and still a rural place throughout.

Svente County takes pride – and justly so – in not only its lovely surroundings, but also in its rich cultural heritage, including a Roman Catholic Church built in 1800, the magnificent Jaunsvente Manor of Count Plater-Zyberk, a notable example of Baroque and early Classicism architecture, built in 1912. At the moment, the manor has been transformed into a hotel, whereas its renovated outbuilding now houses a museum of military equipment, featuring tanks, armored carriers and other military vehicles.

When God told animals to dig out the course of the Daugava River, the leaping hare led the gang, the fox was sweeping the boundaries with its tail, whereas the mighty bear dug out earth and piled it on the sides. That is why the Daugava makes many turns and has hilly banks. God was not pleased, but the job was done and he took it as it came.

There are quite a few archaeological monuments in the County – castle mounds and ancient cemeteries. Some of the castle mounds are over one thousand years old, while others offer captivating views, for instance, Sudmaļi and Kaķīši castle mounds. But a tower, of course, affords a much better view.

Nature has given Svente many water bodies and high hills, making it a particularly attractive place. Here, the Daugava makes multiple turns in a stretch of ten kilometers, and there are about a dozen lakes here, of which Lake Svente is the largest.

Deep and crystal-clear Lake Svente

Lake Svente lies just one-and-a-half kilometers from Egļukalns observation tower, abundant in marsh plants and with a wide belt of reeds around it. This is one of the deepest lakes in Latvia, with crystal-clear water. The average depth is 7.8 meters, but the greatest depth is 38 meters. There are several islands and peninsulas at the lake, habitat to protected bird species: the black-headed gull (*Larus ridibundus*), the Eurasian (*Botaurus stellaris*) and little bittern (*Ixobrychus minutus*) and other birds species nest here.



Picturesque Svente Nature Park

In order to protect the unique beauty of Svente, the Svente Nature Park was established in 1977. The charming scenery includes both nature (lakes, broad-leaved and spruce forests) and cultural landscapes (rural populated areas and agricultural areas). The park is hilly, with differing altitude: Lake Svente is 137 meters above sea level, whereas Egļukalns, the highest peak of Augšzeme Upland, is 220 meters above sea level.

Tower above spruce tops

One might think that the view from Egļukalns Hill is impressive enough, nevertheless, a 26.5-meter wooden observation tower was built at the top of the hill in 2004, which affords an awe-inspiring view of not only Latgale forests, hills and lakes, and of Daugavpils fourteen kilometers away, but also, weather permitting, even the closest Lithuanian regions and Ignalina nuclear power plant can be seen from the tower. In the autumn, the golden maples contrast with the dark-green spruces around the hill, creating the impression of mountains of gold scattered around the tower.

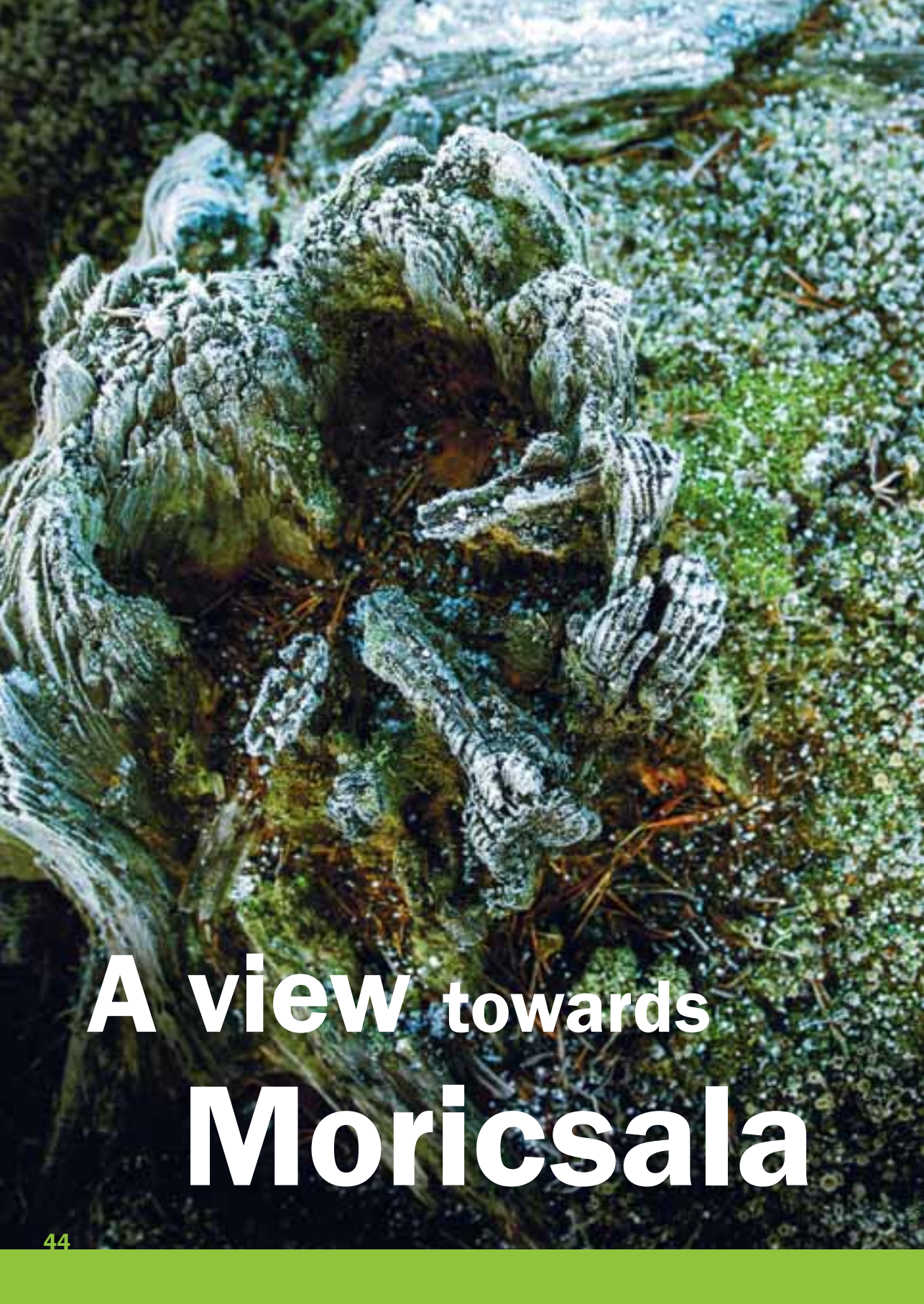
The tower soon became popular with travelers. Stories about breathtaking views from the tower were told and retold, and increasingly more people made the trip to Svente to behold the beautiful scenery from atop the tower. It has also become a popular recreation spot with local residents.

The tower, which had become highly popular by that time, was renovated after much wear and tear in 2012. Now there is also a pergola, benches and tables at the foot of the tower. There are downhill and cross-country skiing courses nearby, a place for various athletic competitions during the summer, but the tower still remains the main attraction, presenting the opportunity to see farther than usual.



Rules and regulations for observation platform

- * Persons under the age of 16 can ascend only under the supervision of authorized tour guides or persons of legal age
- * No more than 20 persons can be inside the platform at a time
- * Persons located on the platform must stand evenly at the corners
- * No more than 10 people at a time can be located in one of the corners
- * It is not recommended to visit in times of inclement weather (strong winds, rain, snow, etc.)
- * It is forbidden to ascend the tower under the influence of alcohol. Smoking and using any flammable devices is also prohibited
- * Any access to platform other than the provided steps is prohibited
- * No hanging off the tower or any attempt to sway it



**A view towards
Moricsala**

Ūdrkalna skatu tornis (Ūdrkalns observation tower)



Ģibuļu pagasts
Talsu novads

Rīga – 140 km
Talsi – 20 km



A "Dragon-fly" in Spāre

On the road to the Ūdrkalns (Otter Hill) observation tower, it is recommended to start your journey at the LVM recreation and tourist center “Spāre” (Dragon-fly), which is located on the banks of Gulbis Lake (Swan Lake). Here, you can rent a bicycle and take a ride on one of the special paths, which begin at the “Spāre” guest house, all the way to the observation tower. The village of Spāre is the second most populated area in Ģibuļu County, located between lakes Gulbis and Spāre. The village went through a relative boom period at the end of the 19th century, when the Riga–Ventspils rail-line was constructed. Around Lielspāre Station and the Spāre Manor (built in 1790), the historical center of Spāre began to blossom – called Vecspāre (Old Spāre). The manor itself is a one-story building with an English basement, and features two very interesting spans of stairs, which have monograms engraved. In the 1960s, the building went through a reconstruction and a school was opened. As a matter of fact, Spāre has one of the oldest schools still in existence in the region, with historical archives pointing out that a school existed here already in 1760. The planning of Spāre Manor Park makes it one of the most attractive such parks in Kurzeme Province. The park still features 17 different plant and tree species which are not native to Latvia, including an old oak tree which has a girth of 4.2 meters, and a maple tree which is 3.5 meters round. It is also worth a visit to the local national architectural landmark – the Spāre Evangelical Lutheran Church, built in 1658. According to local legend, a beggar was accidentally immured in the church’s wall.



The cunning swan

The tourist and recreation center “Spāre” is located on the banks of Swan Lake. It is not a big lake, but is popular for fishing. It turns out that the lake is actually quite challenging for fishermen, due to its distinct flora, as it has a double bottom in some places where larger fish like to hide. Thus, it is quite an achievement to pull out one of the lake’s large pike. Enjoy the lake and remember its surroundings well, as the lake cannot be seen from atop the Ūdrkalns observation tower. From here, you will see the vast Lake Usma.



Where the trees twist the clouds into braids

Ūdrkalns, or Otter Hill, is itself 57 meters high, but the dense forest around it means that there is not much of a view from atop the hill. But everyone would like to have a view, as nearby, surrounded by forests, is legendary Lake Usma with Moricsala Island in the middle of it. Thus, in 2007, LVM decided to build a 26-meter-high observation tower on Ūdrkalns. Those who witnessed how the tower was built are still rather horrified by the ordeal: men as agile as cats jumping with ease from one log to another to connect the construction. Now, the tower looks as stable as ever, and even the more faint-hearted have drawn up the courage to walk up to the top platform, from where a breathtaking view of the surrounding area can be enjoyed. On a clear day, it is possible to see Lake Usma, the town of Stende, the village of Mundigciems, as well as the town of Talsi. Sometimes, clouds run furiously across Lake Usma, but are stopped by the treetops. Then, the slender pine trees twist the passing clouds into braids, so not to disturb the amazing view.

Mysterious Lake Usma

Lake Usma is one of Latvia's largest lakes, and its beauty borders three whole regions – Talsi, Ventspils and Kuldīga. Lake Usma got its name from the Livonian language, which means “fog”. There are certainly no shortage of foggy mornings and evenings here, as even the locals sometimes get lost amongst the lake's seven islands. However, there is also another legend how the lake got its name. A little boy, seeing large and dark cloud cover over the area, began to yell: “Usmīgs! Usmīgs!” The cloud then descended down to earth, creating Lake Usma, as the boy had already given it a name. The lake itself is believed to about 10,000 years old, around the same time Ūdrkalns was formed. The lake is abundant with islands, and has many inlets. Viskūža Island is the largest of the lake's islands, but Moricsala Island is known as the romantic one, with many legends.

Romantic Moricsala

Moricsala Island was previously called Fish Island (Zivju sala) until 1727, when Maurice de Saxe, claimant to the throne of the Duchy of Courland, who was also the great-great-grandfather of the famous French writer George Sand, was forced to hide on the island after losing a battle. After this event, the island was given a new name. The Moricsala Nature Reserve is also the oldest protected area in Latvia, as it was established in 1912. The island is special due to its unspoiled eco-system and unique natural surroundings, as human activity has been restricted for over 100 years on the island. The entire nature reserve is made up mostly of broad-leave trees, like oak, maple and linden trees. The island also has an abundance of rare and protected plant species, including 400 different types of spore-plants and seed-plant. The animal species on the island have been studied at a lesser level, but 222 different type of butterfly species are known to inhabit the island. Some of these butterfly species are known to inhabit only the island, and have not been observed in other parts of Latvia or the Baltics.



Ložmetējkalns

Latviešu
strēlnieku
Ziemassvētku

kauju pieminai

Honoring

the Latvian

Riflemen

Ložmetējkalna skatu tornis
(Ložmetējkalns observation tower)



“Mangali”
Valgundes pagasts
Jelgavas novads

Rīga – 35 km
Jelgava – 25 km



The heroic Christmas Battles

Each year we move farther away from Christmas 1916 (old calendar Christmas), when in freezing cold temperatures several brigades of exhausted, worn-out and famished Latvian Riflemen fought to lay the foundation of a new Latvian nation. For 5,000 young men, this was their last Christmas, with many others injured, or lost without a trace.

History tells us that the Christmas Battles were the largest Russian military operation on the Riga Front during WWI, with most of the burden on the shoulders of the young Latvian soldiers. During the ferocious battles, soldiers of the Latvian battalion earned the reputation as extremely capable warriors, and even the German side admitted the excellence of these Latvian men.

Despite the many warm and peaceful Christmases that have past, we cannot forget those who fell in battle thinking about their fledgling nation. At Ložmetējkalns (Machine-Gun Hill), everything is being done to immortalize and commemorate these brave men. Today, Ložmetējkalns, which is located in the Tīrelpurvs (Tīrelis marsh) area, has been deemed a national historical site, and has been included on Latvia's list of protected areas. Ložmetējkalns is also one of the best-preserved WWI battle sites in Europe. To help keep the memory of the Christmas Battles alive, a special protected forest area, in a territory making up 6,612 hectares, has been established at Tīrelpurvs.





At the spot where the Christmas Battles began, a special memorial has been set-up – a six-meter high wooden sword, which symbolizes the German defense line that was cut through by Latvian swords.

Located in the area around Ložmetējkalns, Tīreļpurvs and the “Mangaji” farmstead are unique and well-preserved fortification structures from WWI and the Christmas Battles. It includes various historical sites and objects from the 1916 Christmas Battles – Russian and German trenches, information posts where the front’s lines were broken, as well as cemeteries for the war-dead.

A special museum about the Christmas Battles has also been established inside the “Mangaji” farmstead, which is a branch of the Latvian War Museum.

Over the years, Ložmetējkalns has become a symbol of the heroism of the Latvian Riflemen, as well as a memorial symbol. In 1977, a special memorial stone was unveiled on the hill, with a plaque added in 1993, with the words: “Machine-Gun Hill – in memory of the Latvian soldiers who fought in the Christmas Battles”.

Freedom won on the battlefield

Ložmetējkalns earned its unique name already before WWI, as the German army had fortified the area quite substantially. The hill itself is part of a dune, and is 18.5 meters high and 70–300 meters wide.

In 2005, at Ložmetējkalns, the place where the idea of an independent Latvia was born through the legendary Latvian Riflemen who fought here, a 27-meter-high observation tower was erected, where it is possible to see the surrounding area where the Christmas Battles were fought.

After climbing up the tower, a stunning view of the surrounding Maztīrelis marsh can be seen, as well as remnants of the old German narrow-gauge railway line, and forests, forests, and more forests. Take a look at the area that Latvian author Jānis Akurāters called: “the place where the right for freedom was won on the battlefield”.

“Restoring the observation tower at Ložmetējkalns, we offer any visitor the opportunity to become acquainted with this important page in Latvian history and see for themselves where the legendary Christmas Battles took place. Visitors will also be able to take in the breathtaking scenery from atop the tower, as well as pinpoint where the battles took place,” the board chairman of joint-stock company “Latvia’s State Forests” (Latvijas valsts meži), Roberts Strīpnieks, said at the opening of the tower in 2005. His words have since come true. Ložmetējkalns has become a popular site where many people from all over the country and beyond come to honor those who died in combat for the idea of an independent Latvia. Every January, special events honoring the memory of the Latvian Riflemen are held at Ložmetējkalns, where persons come to feel just for one day how it was in the harsh conditions the Latvian Riflemen had to endure each and every day.





Latvia's State Forests Warning

DON'T LITTER!
YOU WILL TURN INTO PIG!



Back to Mother Nature!

Recreation and Tourism Centre "Spāre"

"Dumbri", Ģibuļu pagasts, Talsu novads, LV-3298, Latvia
Phone +371 26669099



Recreation and Tourism Centre "Ezernieki"

"Ezernieki", Indrānu pagasts, Lubānas novads, LV-4827, Latvia
Phones +371 26671421, +371 27840643, +371 26666090



Lake Lielauces

Lielauces pagasts, Auces novads, LV-3723, Latvia
Phone +371 26556771



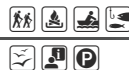
Lake Zebrus

Bikstu pagasts, Dobeles novads, LV-3713, Latvia
Phone +371 29252368



Lake Kaņieris

Lapmežciema pagasts, Engures novads, LV-3118, Latvia
Phone +371 29253514



Jaunmoku Palace

Tumes pagasts, Tukuma novads, LV-3139, Latvia
Phones +371 26187442, +371 63107125
www.jaunmokupils.lv/en



www.mammadaba.lv