Ljubljana Botanic Garden
Botanični vrt Ljubljana (Ljubljana Botanic Garden)
Oddelek za biologijo Biotehniške fakultete Univerze v Ljubljani (Biology Department of the University of Ljubljana’s Biotechnical Faculty)
Ižanska cesta 15, SI-1000 Ljubljana
Tel.: +386 (0)1 427 12 80
Website: www.botanicni-vrt.si
e mail: botanicni.vrt@siol.net, info@botanicni-vrt.si

Opening Hours
The Garden is open to visitors daily throughout the year:
7:00-19:00 from April to October, 7:00-20:00 in July and August, 7:00-17:00 from November to March.

Some plants are available for purchase, daily from 7:00 to 14:00. Admission for self-guided individual and group visitors is free. Charges apply for expert guided tours, available to groups of 15 or more.
It was on the warm 11th July 1810 when the Ljubljana Botanic Garden, originally called the Native Flora Garden, was opened on a plot by the Gruberjev prekop drainage channel at the northern foot of Ljubljana's castle hill. To mark the occasion, a linden tree which still grows today was planted there by Marshal Auguste Marmont, the first Governor-General of the Illyrian Provinces. The garden was a section of the École Centrale university college serving the purposes of medical studies. It was designed by Franc Hladnik (1773-1844), its first director. Originally it measured 33 ares. Thanks to Hladnik and his acquaintances with Austrian botanists, it was not closed down after the French retreat and the re-establishment of Austrian rule, but was to become the only institution of the time to run uninterruptedly until the present day. Along with the National and University Library, the Ljubljana Botanic Garden is recognised as the oldest running cultural and educational institution in Slovenian inhabited areas.

Franc Hladnik (1773-1844), the director of the Native Flora Garden until 1834, also worked as a university college teacher and, later, the prefect of Ljubljana Grammar School. As the school ranked among the Austrian lands' best schools of the time, Hladnik was decorated by Emperor Franz I. During his tenure, the school's students included France Prešeren, who was to become the greatest Slovenian poet, and Hladnik is known to have acted on his behalf.

Andrej Fleischmann (1804-1867) came to the Garden in 1819, while he was still Hladnik's student. He became a gardener and Hladnik's faithful companion on his excursions. When Hladnik's successor Ivan Nepomuk Biatzovski left the Garden in 1849, Fleischmann took over the management and remained the Garden's director until his death in 1867. 1843 saw the release of his important work Übersicht der Flora Krains (An Overview of Carniolan Flora).

In 1889, Alfonz Paulin (1853-1942), who had taken over the management of the Ljubljana Botanic Garden only three years earlier, began issuing Index seminum (Seed Index). This led to the establishment of contacts with 78 botanic gardens across Europe. Between 1901 and 1936 he amassed his famous herbarium collection of Carniolan flora entitled Flora exsiccata Carniolica.
In 1920, the Garden fell under the auspices of the University of Ljubljana, founded a year earlier. It remains to be a unit of the Biology Department at the Biotechnical Faculty of the University of Ljubljana.

After World War II, in 1946, the Garden was expanded to 2.35 hectares and the first glasshouse was built on its site. Due to the widening of a nearby road it was later reduced to two hectares. A decision was taken that a new botanic garden should be landscaped as part of Ljubljana’s Biological Centre at the foot of the Rožnik hill opposite the Zoo, but unfortunately it has not been implemented.
The first printed version of the Ljubljana Botanic Garden's Seed Index (<i>Index seminum</i>), published in 1889. The marked items are part of a seed order placed by Edinburgh's Royal Botanic Garden.

In 1991, the Ljubljana Botanic Garden was protected as a monument of landscaped nature at the municipal level. As such it will continue to exist, also as part of the city’s cultural heritage.

The Ljubljana Botanic Garden, which contains around 4,500 plant species from around the world, is an institution open to the general public. It is worth visiting at any time of the year. Whenever you come you will be able to find something interesting and attention-grabbing. But you may just as well take a walk of or sit about the Garden only to relax and enjoy landscaped natural surroundings.
— **Collection of plant species.** The Garden currently contains around 4,500 native plant species and species introduced from different parts of the world.

— **Maintenance of a plant seed bank.** Every year, seeds of the plants growing in the Garden are collected to be exchanged with seeds from over 300 botanic gardens around the world. A seed index entitled *Index seminum* has been released annually since 1889.

— **Ex situ (off-site) conservation.** An important part of the Garden’s mission is to dedicate attention to Slovenia’s endemic and endangered plant species. Fleischmann’s parsnip (*Pastinaca sativa var. fleischmannii*), for instance, only survives in the cultivated environment of the Ljubljana Botanic Garden and is a great rarity in global terms. In the first half of the 20th century it was found on Ljubljana’s castle hill, located in the vicinity of the Garden.

— **Promotion of plant biodiversity.** The Garden organises guided tours, lectures, workshops and exhibitions for general public, and is involved in publishing activities.

— **Education and upbringing.** The Garden runs activities for children of nursery and primary school age as well as for secondary school and university students, providing them with support in learning various subjects related to the plant kingdom.

— **Horticulture.** Slovenia has a rich and diverse plant life which includes over 3,450 different species growing in the wild. The species-rich assemblage of plants contained in the Garden includes a considerable number of species peculiar to Slovenia.

— **Research.** The Garden researches into Slovenia’s endemics (plant or animal species found only in limited areas), endangered species, and the variation present within particular native species. The Garden also serves as a research facility for various institutions involved in plant science research.

— **Ethnobotany.** The Garden runs various workshops on different uses of plants as part of its efforts to record and preserve the ancient knowledge of plant use.

— **International relations.** The Ljubljana Botanic Garden is a member of Botanic Gardens Conservation International (BGCI) and the International Association of Alpine Botanical Gardens (Associazione Internazionale Gardini Botanici Alpini - A.I.G.B.A.). It serves as the representative of the network of botanic gardens and arboretums of Slovenia and regularly contributes to European and world conferences on botanical topics.
Visitors to the Garden learn about the significance of the biodiversity of the plant kingdom.

The Garden's area dedicated to research

A glimpse at the Garden's international activity
Garden sections

1 Arboretum
The part of the Garden where tree and shrub species are prevalent. A large part of the Arboretum is situated in the oldest part of the Garden.

2 Plant system
The plant beds in the central part of the Garden, where about 80 plant families, each represented by a number of different genera, are arranged according to their evolutionary relationships.

3-4 Pool and pond section with aquatic and wetland plants
This section mainly includes wetland and aquatic plants requiring special conditions to thrive outside their natural habitat.

5 Rockery
A section where mainly plants from mountain and karst areas are sorted according to their geographical origin and therefore referred to as ecogeographical groups.

6 Glasshouse
This section houses mainly tropical plant species requiring high air moisture levels and more or less even temperatures throughout the year. It is only open for tours led by specialist staff and arranged by prior appointment.
7 Mediterranean plants
Here, Mediterranean plants from different parts of the world are grown in large pots, which are transferred to the glasshouse in winter.

8 Thematic garden
Various plant groups, such as healing, poisonous and industrial plants, are arranged according to their use.

9 Cultivation section
This section contains plant beds where plants to be transferred to different parts of the Garden are cultivated and propagated. It also provides space for research work. It is only open for tours led by specialist staff and arranged by prior appointment.
Pools with aquatic and wetland plants

Plant system

Pond with water and waterside plants
Rockery

Glasshouse

Mediterranean plants
In warm winters, lawns are covered with common snowdrops already at the end of January.
The Ljubljana Botanic Garden offers you an opportunity to take a walk of the plant kingdom in miniature. It contains plants from both Slovenia and other parts of the world. As its appearance changes constantly due to the changing of seasons, it is worth visiting more than just once, possibly in different seasons of the year.

**Spring**

As soon as the cold of winter gives way to warmer weather, usually still in winter, and the coat of snow disappears, common snowdrops (*Galanthus nivalis*) begin to bloom and the Garden is once again clad in white. Winter aconites (*Eranthis hyemalis*) begin to flower, soon followed by primroses (*Primula vulgaris*) and spring crocuses (*Crocus vernus* subsp. *vernus*). Clumps of other species of the genus *Crocus* begin to bloom on the rockery. The Garden provides home not only to common snowdrops but also to an outstandingly rich collection of common snowdrop varieties from different parts of Slovenia. Late March and April see the blooming of the earliest flowering endemics: Carniolan primrose (*Primula carniolica*), Idrija primrose (*P. x venusta*), Hladnik's scopolia (*Scopolia carniolica f. hladnikiana*) and mountain alyssum (*Alyssum montanum* subsp. *pluscanescens*). Lawns are enlivened by the intense green of ramsons (*Allium ursinum*), which bloom in late April and cover the green of their foliage with the white of their flowers. In early May, when the Garden is already fully in bloom, it is peonies (*Paeonia*) that are most striking.

It is characteristic of undergrowth plants to bloom early because they need to accumulate enough nutrients for seeds to ripen before trees begin to take away too much light.

**Summer**

During the summer months, the most flowery parts of the Garden are the rockery, the plant system section and water surfaces. On the lawns and in the tree section it is nice and cool. Numerous benches shaded by trees provide ample space to enjoy the pleasant surroundings. In the oldest part of the Garden there are several concrete pools containing some of the plant life that used to grow in the Garden in the past including, among others, a number of interesting carnivorous species such as oblong-leaved sundew (*Drosera intermedia*), common sundew (*D. rotundifolia*), great sundew (*D. anglica*), common butterwort (*Pinguicula vulgaris*) and greater bladderwort (*Utricularia vulgaris*), as well as bog rosemary (*Andromeda polifolia*) and common cranberry (*Oxycoccus palustris*). In the summer, quite a few species endemic to
Slovenia bloom on the rockery: Piron’s medic (Medicago pironae), decumbent spirea (Spiraea decumbens), and Slovenia’s only generic endemic species, hladnikia (Hladnikia pastinacifolia). The plant system section with over 80 genera and more than 1,200 species from various parts of the world flowering one after another throughout the summer offers a palette of colours. Plants from dry regions (succulents) and various parts of the Mediterranean grow in large pots, which need to be transferred to the glasshouse in winter.

**Autumn**

In the autumn, the Garden is vibrant with luminous colours. Most plants have already produced fruits, some only just begin to flower. The latter include autumn crocuses such as hairy crocus (Crocus pulchellus) with violet-veined lavender-blue flowers with a yellow style and whitish anthers, which originates from the Balkans, autumn crocus (C. speciosus) with light violet flowers, deep blue veins and a strong bright-orange divided stigma, whose home is Turkey, autumn daffodil (Sternbergia lutea), meadow saffron (Colchicum autumnale), various asters (Aster amellus, A. linosyris) and several other species. On warm sunny days, visitors to the Garden love to sit down on benches and enjoy the late-flowering plants and colourful leaves. More vibrant colours and lustrous greens come from the collections of Mediterranean plants, which are at their most beautiful in the autumn sun.

**Winter**

In winter there may be a touch of melancholy about the Garden’s numerous dry and bare plants, but even then the Garden is interesting. Here and there, one can still find a tiny little flower. In warm winters several shrub species and perennials wake up early. Numerous tropical plants needing warmth are squeezed into the overcrowded glasshouse. Mediterranean plants, relocated to the Biology Department of the Biotechnical Faculty, situated opposite Ljubljana Zoo, are still available for viewing, but only by appointment. On cold and grey winter days they offer visitors an opportunity to walk through a green oasis of fragrant Mediterranean warmth. As the frosts and snows of winter arrive in Ljubljana, the Garden’s dry and bare plants are livened up by the pristine whiteness of ice crystals. One should simply take a walk through the Garden and enjoy the sometimes short but always unique winter idyll.
Hladnikia (Hladnikia pastinacifolia) is a so called paleoendemic, an endemic species living in Slovenia mainly as a relict of Tertiary flora (the plants that existed in the Tertiary period, an early division of the Cenozoic Era). Hladnikia is Slovenia’s only generic endemic. It belongs to the umbel family, which includes several well known edible plants such as carrots, parsley, lovage and celery. The colour and shine of hladnikia’s lustrous leaves are slightly reminiscent of celery, but hladnikia is far more delicate, its leaf stems being shorter and foliage thicker. It grows naturally in a very limited area of the Trnovski gozd plateau. Its name was coined by the German botanist Ludwig Reichenbach in honour of Franc Hladnik, the founder of the Ljubljana Botanic Garden.

Scopolia (Scopolia carniolica) is a plant blooming in beech forests in spring. At first a small plant, it quickly develops into a lush herb with nodding brown flowers hanging from under the leaves.

The plant was brought to the world of botany from the area of the town of Idrija, where it was discovered by the town’s first doctor, Johannes Antonius Scopoli (1723-1788). It was described even earlier, by Pietro Andrea Mathioli (1500-1577). Scopoli sent its seeds along with the first edition of his seminal work on Carniola’s native flora, Flora Carniolica (1760), to the Swedish botanist Carl von Linné. In honour of Scopoli, Linné named the plant Hyoscyamus scopolia. In 1764, an all new genus, Scopola, was introduced in Scopoli’s honour by the Viennese botanist...
Nicolaus Joseph von Jacquin. In the second edition of Scopoli’s *Flora Carniolica* (1772), the plant was already classified as a species of the genus *Scopola*. Since then, its name has changed only slightly, into *Scopolia carniolica*.

Also the endemic variety of this plant, *Scopolia carniolica f. hladnikiana*, is related to the town of Idrija. Franc Hladnik, the Idrija-born founder and director of the Ljubljana Botanic Garden, discovered it in the area of the village of Turjak in 1819. His successor at the Garden, Ivan Nepomuk Biatzovsky, and his student and gardener Andrej Fleischmann later named it after him. The variety has also been found at other sites in Slovenia.
Fleischmann’s parsnip (Pastinaca sativa var. fleischmannii) is a Slovenian endemic species extinct in the wild. It was named in honour of Andrej Fleischmann (1804-1867), a gardener at Ljubljana Botanic Garden, by his boss, Franc Hladnik. It is the Garden’s most valued treasure. Throughout botanical literature, the Ljubljana Botanic Garden is considered to be its only remaining habitat. Fleischmann’s parsnip is a biennial. During the first year, it forms only a rosette of bipinnate leaves growing from a long and thick root. During the second year, an up to 100-centimetre stem, grooved and covered with short stiff hairs, grows from the rosette. Its large umbels consist of a multitude of small yellow flowers.

Common parsnip (Pastinaca sativa), easily found in meadows and on the sides of paths around the time of the second hay harvest, is one of the most frequent meadow plants, while Fleischmann’s parsnip is a curiosity. It differs from common parsnip in that its leaves are bipinnate, more serrated and perhaps a darker shade of green. Apart from Ljubljana’s castle hill, where it grew from 1819 to about 1840, no other habitat of Fleischmann’s parsnip has ever been found.
Kojnik Siberian iris (Iris sibirica subsp. erirrhiza)

In Slovenia, Siberian iris (Iris sibirica) is a relatively frequent species growing in wet meadows which may be flooded at times, while Kojnik Siberian iris (I. sibirica subsp. erirrhiza), its subspecies, can only be found in very dry habitats in Slovenian (and Croatian) Istria, in the Kras region, on Mount Nanos and, probably, on Mount Kojca and in a number of other dry mountainous habitats.

Kojnik Siberian iris differs from the common Siberian iris in that its rhizome neck is thicker, its leaves are hardly any shorter than the stem, its petals are narrower or even linear, and in that it requires different growing conditions, as mentioned above.

The classic habitat of Kojnik Siberian iris is Mount Kojnik, located in the Slovenian part of the Istrian Peninsula near the border with Croatia. In 1897, Eduard Pospíchal described the plant as a separate species, but not without hesitation and only years after he had first found it.

Regardless of the value and rank ascribed to it, Kojnik Siberian iris is an interesting and beautiful plant found in a very limited area.
Decumbent spirea

When decumbent spirea (*Spiraea decumbens*) is in bloom, the Ljubljana Botanic Garden’s rockery section offers a glorious sight. In its natural habitat, the scree slopes in the Breginjski kot valley, where growing conditions are harsher than on the Garden’s rockery, decumbent spirea rarely blooms so abundantly. In Slovenia, this endemic species of the foothills of the western part of the south-eastern Limestone Alps is only found in the Breginjski kot area, the eastern edge of its habitat range.

Decumbent spirea (*Spiraea decumbens*)

Houseleek

In Slovenia, there are only two species of houseleek: common houseleek (*Sempervivum tectorum*) and Juvan’s houseleek (*S. juvani*), the latter found on Mount Donačka gora and Mount Resenik in the eastern part of the country.

The habitat of Juvan’s houseleek has been known since the first half of the 19th century, but it was given its present name and recognized as a species only in 1971, when it was described by Vinko Strgar PhD (1928-1992), the then director of the Ljubljana Botanic Garden. Before 1971, the houseleek found on Donačka gora and Resenik was considered to be Wulfen’s houseleek (*S. wulfenii*), which grows in the Swiss, Italian and Austrian Alps. Only a more detailed and thorough examination revealed that the houseleek growing outside the Alpine area, in Slovenia’s sub-Pannonian region, differs from the houseleek found in the Alps. Both Wulfen’s and Juvan’s houseleeks are yellow-flowered, but Juvan’s houseleek’s rosette leaves are hairy or even minutely glandular-hairy, while the leaves of
Juvan's houseleek (*Sempervivum juvani*)

Wulfen's houseleek are hairless.

Juvan’s houseleek was named after Franc Juvan (1875-1960), a gardener at the Ljubljana Botanic Garden from 1896 to 1960 and a great plant expert. Juvan began his career at the Garden at the time when its director was Alfonz Paulin. He became Paulin’s assistant, a plant collector and a knowledgeable plant expert.
Carniolan primrose (Primula carniolica)

In Slovenia, Carniolan primrose (Primula carniolica) grows naturally only in parts of the Notranjska and Primorska regions and at a single site in the Gorenjska region. It is found in the western part of the pre-Alpine area and on the northern edge of the Dinaric region. It is interesting that this endemic species was discovered already by the doctor and natural scientist Johannes Antonius Scopoli, who was employed as the first doctor at a mine in the town of Idrija between 1754 and 1769. Unfortunately, the primrose found by Scopoli was not recognized as Carniolan. The plant was identified as Primula carniolica only later, in 1778, when it was described by the Viennese botanist Nicolaus Joseph von Jacquin. Even though before him Scopoli reported that the habitat of this particular variety of primrose was the surrounding area of the Divje jezero lake in Idrija, where it can still be found today, Jacquin stated that it grew in the Carniolan Alps. The approximation that may have been good enough for him is, in truth, completely inaccurate as Carniolan primrose has so far not been found in the Alps. In 1838, its site by the Divje jezero lake was visited by Frederick Augustus II of Saxony. On a previous occasion, marked by the erection of a commemorative obelisk, the Saxon king also visited the site of Blagay’s daphne (Daphne blagayana) on Mount Polhograjska gora.
Idrija primrose (Primula x venusta)

On sites where Carniolan primrose (Primula carniolica) and bear’s ear (P. auricula) are found closely together, they cross-breed and produce a very rare endemic hybrid, Idrija primrose (P. x venusta). Cross-breeding only occurs where the two species grow less than 50 metres apart. In primroses, cross-breeding is relatively common, but still there are certain obstacles. Self-pollination is inhibited by the physical differences between the plants’ long and short corolla tubes and the size of pollen grains, and cross-breeding by different flowering times. Bear’s ear produces flowers a little earlier than Carniolan primrose and even then only in case that the size of the plant population is large enough. However, there are always some late-flowering specimens of bear’s ear and early-flowering specimens of Carniolan primrose. Besides, once in several years, the weather conditions are such as to allow for more or less simultaneous flowering. If pollen is transferred from one species to the other by pollinators, the chances of success are increased, but the hybrids are usually infertile.
Water violet

When common primrose or other primroses are talked about, the subject of discussion is immediately recognized by everyone, but hardly anyone knows that some of the primroses’ close relatives, such as water violet (*Hottonia palustris*), are aquatic plants. A close look at this plant reveals that its flowers are similar to those of common primrose, just that they are borne in racemose inflorescences rising above the water surface. They range in colour from white to pinkish white. The plant grows in shallow waters with muddy bottoms, occasionally also on marshy ground. Its root system is anchored in the underlying mud, while its slender stems rise up to the water surface, where rosettes of delicate, filigree pinnate leaves form. They float on the surface like little water stars, bright and shiny green in the sun. Unless the plant wakes up in May and begins to flower, it may float limply in slow flowing water throughout the year, surrendering itself to the hardly noticeable pull of the lazy current. Like an anchor, its root holds it firmly in place while it bends in the direction of the current. In May, however, the water violet’s limpness turns into its opposite. Its stem, all of a sudden firm and erect, grows over 30 centimetres high above the water surface. White to pinkish white primrose-like flowers with yellow throats begin to open from the bottom upwards. The inflorescences open slowly, but once the plant is fully in bloom, its green gives way to pinkish white.

Blagay’s daphne

When on 22 May 1837 Count Richard Ursini von Blagay was brought an unknown flowering plant by one of his peasants, he immediately knew that something important was found. The next day he sent the plant to Henrik Freyer, first curator of the Provincial Museum of Carniola (Kranjski deželni muzej), with a note saying that it was probably a daphne. Freyer assumed it was a new discovery and his very first notes on the plant included the name *Daphne Blagayi*. But he was cautious. To prevent anybody else from being credited for the discovery, he sent a letter about his assumption to two botanists: Ludwig Reichenbach (1793-1879) in Dresden and David Heinrich Hoppe (1760-1846) in Regensburg. He was not mistaken. His daphne was really a new species. Freyer appropriately renamed it *Blagayana*. His surname was added to its name to give him credit as the first botanist to have described it.

On 14 May the following year, the classic habitat of *Daphne blagayana* Freyer was visited by Frederick Augustus II of Saxony.
Water violet (Hottonia palustris)

Blagay’s daphne (Daphne blagayana)
How to get to the garden?

From the city centre, the Ljubljana Botanic Garden is quickly accessible on foot (walk along the Ljubljanica river, past the suburb of Prule, along the Gruberjev prekop drainage channel and across the Karlovški most bridge) or by bus (city bus service no. 3 to Rudnik or 27 to NS Rudnik).

As an alternative, you may opt for a pleasant several-hour self-guided tour including Ljubljana Castle. The castle hill can be accessed via several easy walking routes, by tourist road train or funicular railway. The funicular carriage holds 33 people and takes one minute to ascend the top of the hill. The difference in height between its two platforms is a little less than 70 metres. No matter how you access the top, you will first take in the stunning panoramic views of the city. In front of the entrance to the castle’s inner courtyard, on your left, you will see an interesting sundial, whose inscription reads: “Sine sole sileo” (Without the sun I am silent). Once inside the castle complex, you can ascend the Outlook Tower. On a clear day, you will be able to see all the way to the Julian Alps and Slovenia’s highest mountain, Triglav (2,864 m). The ticket to the Outlook Tower includes free entry to the Virtual Museum, located just below the Outlook Tower. There you can witness the history of the city and its castle using virtual reality technology. Throughout the year, the castle complex is a venue for all kinds of cultural and social events and functions. Chance visitors are often attracted by interesting exhibitions, concerts and other events held there.

In the castle’s courtyard, refreshments are available from the Grajska kavarna coffee house. If you wish to take a little something of Ljubljana home with you, stop at the Castle’s souvenir stall or the Rustika arts and crafts gallery, where you can choose from replicas of Slovenian heritage artefacts. Once you leave the courtyard, head along the chestnut tree-lined walk. Keeping to the right, continue past the monument commemorating the 500th anniversary of peasant risings in Slovenian inhabited areas, sculpted by Stojan Batič in 1974, and the Šance ramparts, redesigned by the architect Jože Plečnik. Descend through the woods to the Roška cesta road. In the woods you are very likely to meet some playful and ever hungry squirrels, so make sure you have some nuts in your pocket.

Continue past the Yildiz Han Turkish restaurant, an authorized user of the Ljubljana Tourism Quality Selection
trademark in 2007, cross the Karlovška cesta road and the Karlovški most bridge, which spans the Gruberjev prekop drainage channel, and there you are – by the fence of the Ljubljana Botanic Garden. To learn as much as possible about the Garden, it is advisable to book a guided tour in advance. To add some fun to your return to the city centre, hop on board a boat departing from the opposite bank of the Gruberjev prekop channel (mind the timetable!) and return to the city centre past the Špica embankment.

Another option is a fully guided tour including a funicular ride to the top of the castle hill, a guided walk of the hill and Botanic Garden, and a boat ride back to the city centre.