Poučna staza Rimska park-šuma
**Poučna staza Rimska park-šuma**

**Welcome!**

The project "Educational trail Roman park-forest" was made during 2014. This was the first educational trail in the area of Daruvar. The project's main goal, which was accomplished through the collaboration of Daruvar city, Croatian National Tourist Board and Tourist Board Daruvar - Papuk, is to expand tourist offer of Daruvar with educational trail, popularization of Roman-park forest among Daruvar citizens, its area and the tourist visitors. The project goals are to raise awareness and educate visitors, especially children and local residents about the natural and cultural attractions, also the general importance of nature protection level.

**Basic features:**
- Trail length: 2 km
- Hiking time: 1 h
- Level of difficulty: easy
- Needed equipment: Comfortable sporting footwear
- The way of tour: hiking

**Educational board themes:**
1. Educational trail Roman park-forest
2. Daruvar love life
3. The geological structure of Western Papuk
4. Thermal water in Daruvar area
5. Climate of Daruvar
6. Geodiversity of Western Papuk
7. Forest - a complex ecosystem
8. General features of Roman park-forest
9. Forest inhabitants - amphibians and insects
10. Forest inhabitants - mammals
11. Roman spring (Julije's spring)
12. Julije's spring - water analysis
13. Forest inhabitants - birds
14. Daruvar's vineyards
15. Jewish cemetery
16. The good green spirit of the family Janković de Daruvar
17. Roman camp II
18. Odroids of Roman park-forest
19. Roman camp I

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Dobre došli!


**Osnovne značajke:**
- Dužina staze: 2 km
- Vrijeme obilaska: 1 h
- Težina: lagana
- Potrebna oprema: udobna sportska obuća
- Način obilaska: pješačenje

**Teme poučnih ploča:**
1. Poučna staza Rimska park-šuma
2. Daruvar voli život
3. Geološka građa Zapadnog Papuka
4. Termalne vode na daruvarskom području
5. Klima Daruvara
6. Georaznolikost Zapadnog Papuka
7. Šume - složeni ekosustav
8. Opća značajke Rimske park-šume
9. Stanovništvo šume - vododjemci i kućci
10. Stanovništvo šume - sisači
11. Rimski izvor (Julije izvor)
12. Julije izvor - analiza vode
13. Stanovništvo šume - ptice
14. Daruvarske vinogorje
15. Židovsko groblje
16. Dobri zeleni duh Jankovića daruvarskih
17. Rimski tabor II
18. Orhideje Rimske park-šume
19. Rimski tabor I
GEOLOŠKA GRAĐA ZAPADNOG PAPUKA
THE GEOLOGICAL STRUCTURE OF WESTERN PAPUK


Poljsku granicu podeže veće građe najvećeg dio zapadnog Papuka i tvoje tuzlanski jezera, koji je geomorfološki trodijel. Prvi dio je napravljena iz glavne strane papukog gorja sa velikim geološkim stijenama, a drugi dio obilježava zapadnog Papuka sa niskim nivoima geoloških stijena.

Papučki narodni park je izrazito razvićen na planini, a na istoku napravljen na planini, sa velikim nivoima geoloških stijena. Na istoku planine se nalaze velike geološke stijene, a na istoku planine se nalaze velike geološke stijene. Na istoku planine se nalaze velike geološke stijene, a na istoku planine se nalaze velike geološke stijene.

Svaki dio papukog gorja ima svojii geološki karakter. Na istoku planine se nalaze velike geološke stijene, a na istoku planine se nalaze velike geološke stijene. Na istoku planine se nalaze velike geološke stijene, a na istoku planine se nalaze velike geološke stijene.
TERMALNE VODE NA DARUVARSKOM PODRUČJU

Thermal or geothermal water is water whose temperature is higher than the annual average temperature in the spring vicinity. From the biological point of view, for therapy and recreation, water warmer than 20 °C is considered thermal water.

Thermal water springs appear in Daruvar city centre, in the area of Julius Park near the river Toplica. Geothermal water springs forth here on four occasions, namely: spring Antuna, source of Central's Bathhouse, source of Marja's Bathhouse—these were sprays made from several smaller water springs. In addition to natural resources, in order to increase the flow rate, more boreholes were drilled; among them the most important are D-1 with depth of 199 m located in Index area and D-1 with depth of 191 m located on the area of Roman Forest.

As far as we consider the amount of groundwater that flows in Daruvar area, in spring the flow rate of all springs and boreholes amounts approximately 30 l/s. Thermal water temperature varies in the range from 40 to 49 °C, the temperature of 46 °C is considered as an average temperature of thermal water in Daruvar. Thermal water temperature is higher during warmer months and lower during colder months. Variations in temperature are result of mixing the thermal water with surface water, as well as due to differences in the amount of pumped water.

Geological setting of thermal water in Daruvar is a result of geological structures in the surrounding region. In fact, the thermal water which springs in the Daruvar area begins its journey as precipitation on the western Papuk massif, east of Daruvar. It flows through the mountain region with altitudes from 600 to 650 m. Jurassic and Trassic carbonate rocks, Permo-Triassic clastic and Paleozoic magmatic rocks dominate in the geological structure of this area. These mentioned rocks are due to their lithological characteristics and different degree of fragmentation very permeable; they accumulate rainwater and sink deep in underground, even to a depth which is deeper than 1000 m. Since the Daruvar area has an increased thermal gradient, the water sinks into the depth and is heated to a temperature of 26-64 °C. Subsidence of geological structures on the west directs the groundwater flow towards west, actually towards Daruvar. In the area of Daruvar, the Paleozoic and Mesozoic rocks which were uplifted through faulting and folding during the Alpine orogeny contact with younger Neogene rocks. They are mostly composed of low permeable clayey-sandy sediments and they form a barrier in order to prevent further groundwater flow to the west; in that way the thermal water is raised towards surface and springs on the surface. The rise of water on the surface is enabled due to hydrostatic pressure that occurs due to the height difference between the accumulation place and spring position. Since the aquifer in the spring area consists of highly permeable rocks, during the uplift of thermal water to the surface comes to its mixing with groundwater which effects on the chemical composition and water temperature.

There was another question regarding how long it takes for underground water to come to the Daruvar area on the slopes of Western Papuk to spring area in Daruvar. Using the radioactive carbon 14 C disintegration method, it was determined the circulation time of about 20,000 years, while based on the mentioned method the circulation time of about 10,000 to 20,000 years. Based on the above mentioned method it can be determined that thermal water which springs in Daruvar represent precipitats that have fallen in the area of western Papuk during last ice age, before 10,000 to 20,000 years.

INFO:

Termalne ili geotermalne vode su one čija je temperatura viša od srednjeg godišnjeg temperature bliže okolice izvorština. Za stvaranju balneologije, za potrebe terapije i rekreacije, termalnom vodom smatra se voda čija je temperatura viša od 20 °C.

Izvori termalne vode pojavljuju se u samom gradu Daruvaru, na području Julijevega parka u neposrednoj blizini toga rijeke Toplica. Termalna voda izvire iz vrlo dubokih izvora, nakon prirodnih izvora iz vrlo dubokih izvora, nakon prirodnih izvora iz vrlo dubokih izvora, nakon prirodnih izvora iz vrlo dubokih izvora.
KLIMA DARUVARA
CLIMATE OF DARUVAR

Vrijeme je trenutno stanje atmosfere, a klime je prosječno stanje atmosfere na nekom prostoru.
Na panonskom prostoru utječu maritimne i kontinentalne zračne masu koje na ovoj području pružaju iz sijevernog Atlantskog i Atlantika, Stotskoj gornja gorica in Sibir. Stota je pod stolnim udarima akeksijskih središta atmosferskog tlaka, odnosno sibirski akumulator.

Prema Köppenovoj klasifikaciji, na temelju podataka Državnog hidrometeorološkog zavoda (DHMZ) za razdoblje od 1968. do 2012. godine, područje Daruvara pripada klasi umjerenog toplinskog tipa (C) u kojem srednja mjesečna temperatura najnižeg mjeseca (studenog) uziže od 0°C, dok srednja mjesečna temperatura najvišeg mjeseca (srpnja) iznosi 21°C. Srednje temperature najnižeg mjeseca nije veći od 2°C, a najniža mjesečna temperatura veća od 10°C. Tijekom godine izražena su dva maksimuma padina - rano ljetno i kasna jesen (x). Potpuna definicija ove klimatske tipa je Cfa/ cu/Cfcb.

Godišnji hod temperature u obilježju tipičnog kontinentalnog klijuča povijest opisuje se u umjerenim višinama sjeverne poluoke. Tako je obilježje uočavali u osklađivanju na klima dijagramu godišnjeg hoda temperature i padina postavlja Daruvar. Godišnja temperatura izražava maksimum koji se javlja u srpnju i minimum u siječnju, oznacuje temperaturni ekstremi javljuju se oko mjeseca danak nakon ljetnog, oznace zimskim položaja. Najniže mjesec je siječanj, a srednja mjesečna temperatura u promatranom razdoblju od 0°C, dok je najniži mjesec srpen sa srednjom mjesečnom temperaturem od 21°C. Maksimalna temperatura iznijerena u Daruvaru iznosi 39°C (28. srpnja 2004. i 28. srpnja 2012.), dok minimalna iznijerena temperatura iznosi -22,1°C (05. veljače 2013.).

Padine su podjednako raspoređene tokom cijele godine, no izražena su dva maksimuma - jedan u lipnju i jedan u rujnu. Prosječna godišnja količina padine izrazilo se od 1970. do 2012. godine iznosi 868,9 mm. O promatranom razdoblju 2010. godine je bila rekorder sa 1512,1 mm padina, dok je godina odnosno 2011. bila izražena suža sa 532,7 mm padina.

Snježna se u Daruvaru bliži od studenog do travnja, a rijetko kada je listopad, snijeg i lipnji. U promatranom razdoblju, prosječno se 34 dana u godini pojavljuje snježni pokrival. Maksimalna visina snijega zabilježena u Daruvaru u promatranom razdoblju iznosi 47 cm, a iznjanje je 12. veljače 1999.

Mrač je vrsta oborina koja nastaje brzim odlaganjem lita i predmeta na nju. Kada je temperatura zraka 0°C ili mjeha, vodena para na dubini odlaganja prolazi u usred staniće, odnose godine kristalizacije vode koji se taloži na tlu na predmetima sa tlu. U Daruvaru se mrač pojavljuje od listopada do travnja, prosječno 62 godina u dan.

Mrač je godine osobljiv značajno činilo tople suh vode i slabih sastina, koji su tako lako udaljene od zraka. Mrač se u Daruvaru ili blujst u cijeloj godini, prosječno 28,8 dana godišnje. U zimskim mjesecima, prolazi Daruvar u koričenje dobija izgubljeni hladni zrak na koju kutline, te stvaranje radijskog tipa magne te jezgrinje drobnog zraka.

Vjetar je strujanje zraka paralelno sa Zemljinom površinom, a određuje se brzinom i smjerom. U Daruvaru najčešći je vjetar iz sjevernog i južnog kvadranta. Otvorenost daruvarskih kutina prema sjeverozapadnom vjetru je najveće sjeverne kutine, dok je u vjetrovima pokrivena kutina Daruvar od istočnog strujanja, također, otvorenost daruvarskih kutina prema sjeveru razložen to tome što srednji najniži vjetar od 2,6 m/s dolazi iz sjevernog kvadranta.

Weather is the current atmospheric state; climate is the average state of the atmosphere at a certain place.

The main influence on the climate of the Pannonian area are affecting factors such as the wind, the temperature and pressure (which flow to this region from the Atlantic Ocean and lower cycles), including the Siberian anticyclone.

According to Köppen climate classification, based on data from Meteorological and Hydrological Institute of Croatia (DHMZ) for a period from 1978-2012, the area of Daruvar belongs to moderate warm rating-type climate / temperature, with the average temperature of the warmest month not below -3°C, and at least one month has an average temperature higher than 10°C. Precipitation is equally distributed throughout the year. The driest month has more than 200 millimeters of precipitation (there are smaller amounts fall during the coldest time of the year (January). The average temperature of the warmest month is not higher than 22°C, and at least four months have an average temperature higher than 10°C (July). During the year, two precipitation maximums are expressed - early summer and late autumn. A complete definition of this climate type is Cfa/cu.

Annual air temperature course in Daruvar has typical characteristics of a continental type that prevails in the temperature conditions in the Northern Hemisphere. These features can be observed on annual course climate diagrams made by meteorological station Daruvar. The temperature curve has expressed maximum which occurs in July, the minimum is occurred in January; actually the temperature extremes occur for about one month after the summer or winter solstices. The coldest month is January, with an average monthly temperature during the observed period. The warmest month is July with average temperature of 21°C. The maximum temperature that has been measured in Daruvar was 39°C (July 2007) and on August 24th, 2012, while the minimum temperature that was measured was -22.4°C (February 2013).

The precipitation is evenly distributed throughout the year, but two maximums can be occurred - one in June and another in September. The average annual precipitation amount in the period from 1978 to 2012 is 868.9 mm. During the observed period 2010 year was a record year with 1312.1 mm of precipitation, while the last year it was extremely dry year with 532.7 mm of precipitation.

Snow in Daruvar is recorded from November to April, and rarely in October, May and June. During the observed period, 34 days in average snow cover appears. During this period, the maximum recorded snow height was 47 cm, measured on February 12th, 1999.

Frost is a type of precipitation that occurs with rapid earth cooling and as well as the objects located on it. When the air temperature reaches 0°C or lower, the frost is a formed. Frost stays on the ground and objects that are located on the ground. In Daruvar, frost occurs from October to April, annually for 62 days per year.

A fog consists of very fine water droplets or ice crystals, which are so light that they can be seen when there is a sense of direction. Daruvar, fog is recorded during the entire year, annually 26.8 days per year. In the months of Daruvar, as a rule in the valley causes the evaporation of cold air at the bottom of the valley, and the creation of radiation fog type with its longer retention.

The wind is air circulation which is parallel to the Earth's surface, and this is determined by the speed and direction. In Daruvar, the most wind comes from the north and south quadrant. The openness of Daruvar valley to the northwest is one of the conditions for frequent northerly wind blowing, while Popuk relief barrier protects Daruvar from eastern flows. Also, the openness of Daruvar to the north-east side is one of the reasons that the fastest wind speed of 2.6 m/s comes from the northern quadrant.
GEORAZNOLIKOST ZAPADNOG PAPUKA

Geodiversity of Western Papuk is the natural landscape variety, and it represents a set of geological (rocks, minerals, fossils), geomorphological (landforms and processes) and biotic (vegetation, wildlife) processes. Therefore, geodiversity is a complex of natural processes along with their occurrences which arise throughout the geological history of Earth.

Western part of Papuk with Lišnje ridge is located east of Daruvar, here is the highest peak of Biokovo-hillocks County – Cimur vrh (863 m), Petrov vrh (814 m) and ridge Ravnica gora with the peak V. Javorik (716 m).

In geological terms Papuk represents a complex structure which is characterized by an exceptional geological diversity. It consists of rocks whose age ranges from Precambrian to Quaternary. The ending part of Western Papuk, actually the area from Daruvar to Vrani havran represents an area of continental erosion. The most covered area since it is composed of Triassic and Jurassic limestone stones with dolomite which is covered with a layer of soil. The type of horst which can be found in this region is called flavjidovka. It is formed with combined processes of fluvioglacial and alpine processes. Relief forms with rounded peaks are shaped like rocky surfaces can be rarely found inside along with deep incised, tectonically conditioned ravines and valleys. The occurrence of horst is proven with numerous precipitated tufa located on geomorphite Vranijska, and in the riverbeds of rivers Toplica and Pula and as well as the valley of Stančevac creek.

Geomorphology

Relief is an integral part of the natural or cultural heritage in a particular area, and it has the same significance as a historic monument and art works. According geomorphological and processes which individually or together with other biocological and anthropogenic elements can become an object of heritage.

Geomorphological analysis involves analysis of cultural and environmental layers which have led to the formation of the present form of the landscape. These processes result in the formation of physical structures such as river valleys, lakes, mountains, and other natural features. Geomorphology studies these physical structures and processes that shape them. The study of geomorphology can provide valuable insights into the geological and environmental history of an area and help us understand how the landscape has evolved over time.

For the city of Daruvar and his immediate surroundings the geomorphological map was made. Analysis of the morphometric parameters of this area suggests that soils and processes in this area are largely a reflection of the tectonic activity. The city of Daruvar is located at the transition of Pupaj Mountain into low plateaus and floodplain of rivers Toplica and Ilova. The largest part of the area is characterized by steep slopes and ravines. The relief is the result of tectonic activity, which has formed numerous ravines on the ground. The central part of the area is dominated by river Toplica, so here was shaped the typical relief type of river, with steep rock walls that do not leave any indifferent. Also, the valley of river Toplica is an extraordinary geomorphological feature.
ŠUMA – SLOŽENI EKOSUSTAV
FOREST – A COMPLEX ECOSYSTEM

A visitor may see the area on which he stands and that surrounds him like a community of trees that have accidentally emerged on a steep forest slope. However, for the full privilege to feel the forest, it is no less important to spend some time on the same location, to look at and come in touch with the life of the forest, its plants, and the animals it brings to life. The forest is a place of spectacle, a place that offers the experience of small orchard and to an extent like small park. One can feel the forest not only through the sense of sight, but also through olfactory sense, as well as the sense of touch. The forest is not only a place for recreation, but also a place where one can feel the warmth of the air, experience the feeling of the forest, and appreciate the moment spent in its embrace. The forest is a place where one can feel a sense of peace, tranquility, and serenity, a place where one can experience the beauty of nature and its elements, and a place where one can find a sense of connection with the natural world. The forest is a place where one can experience a sense of wonder, awe, and respect for the natural world, and a place where one can appreciate the beauty and diversity of the natural world. The forest is a place where one can experience a sense of harmony, balance, and order, and a place where one can find a sense of peace and tranquility. The forest is a place where one can experience a sense of inspiration, motivation, and creativity, and a place where one can find a sense of purpose and direction. The forest is a place where one can experience a sense of community, cooperation, and collaboration, and a place where one can find a sense of belonging and connection. The forest is a place where one can experience a sense of joy, happiness, and contentment, and a place where one can find a sense of fulfillment and satisfaction. The forest is a place where one can experience a sense of spirituality, introspection, and reflection, and a place where one can find a sense of connection with the divine. The forest is a place where one can experience a sense of mystery, curiosity, and wonder, and a place where one can find a sense of fascination and engagement. The forest is a place where one can experience a sense of challenge, perseverance, and resilience, and a place where one can find a sense of growth and development. The forest is a place where one can experience a sense of exploration, discovery, and learning, and a place where one can find a sense of excitement and wonder. The forest is a place where one can experience a sense of adventure, excitement, and thrill, and a place where one can find a sense of adventure and sense of achievement. The forest is a place where one can experience a sense of challenge, perseverance, and resilience, and a place where one can find a sense of growth and development. The forest is a place where one can experience a sense of exploration, discovery, and learning, and a place where one can find a sense of excitement and wonder. The forest is a place where one can experience a sense of adventure, excitement, and thrill, and a place where one can find a sense of adventure and sense of achievement. The forest is a place where one can experience a sense of challenge, perseverance, and resilience, and a place where one can find a sense of growth and development. The forest is a place where one can experience a sense of exploration, discovery, and learning, and a place where one can find a sense of excitement and wonder. The forest is a place where one can experience a sense of adventure, excitement, and thrill, and a place where one can find a sense of adventure and sense of achievement.
OPĆE ZNAČAJKE RMSKE ŠUME
GENERAL FEATURES OF ROMAN FOREST

Roman Forest is a part of extremely valuable and particularly preserved Pannonian woods of mountain range Papuk-Papuk. It is located at the end of northeastern slopes of Papuk Mountain close to the Daruvar city centre. Habitat conditions, particularly atmosphere, soil conditions, vegetation and animal life, are found in this forest of Perilje vegetation zones, and from the floristic point of view it can be defined as an oak and hornbeam stand with beech (Quercus petraea – Carpinus betulus) and hornbeam (Carpinus betulus) forest (Quercus petraea – Fagus sylvatica / Horvatški 1938.). It is historically a part of Hrvatsko primorje, and it is within the Lower Mountain hills up to 500 meters above sea level with humid climate; it grows also on the eustic cambisole and hillside clay.

The main forest characteristic is that is rich with floral composition and species typical for Ilirian floral element. Among the typical trees that grow in forest, trees like sessile oak (Quercus petraea), hornbeam (Carpinus betulus) and beech (Fagus sylvatica) as the main tree species, these species are also accompanied with maple ( Acer campestre), wild cherry (Prunus avium), lime (Tilia sp.) and sycamore (Acer pseudoplatanus). Due to the forest location and strong influence of the urban environment, in certain parts of the Roman forest are still growing trees like black locust (Robinia pseudoacacia), hornbeam (Carpinus betulus), lime (Tilia sp.), and various species of pine (Pinus sp.).

In the shrub layer are growing: hazel (Corylus avellana), dogwood (Cornus sanguinea), common spindle (Euonymus europaeus), common elderberry (Sambucus nigra), small-leaved hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), common spindle (Euonymus europaeus), and wild rose (Rosa canina).

A layer of ground vegetation is consists of numerous mesophytic species such as: large crowfoot (Stellaria holostea), saxifrage (Saxifraga palmata), lesser periwinkle (Vinca minor), mossy saxifrage (Saxifraga hypnoides), dogtooth violet (Erythronium dens canis), ox eye (Hacquetia epipactis), small-leaved hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), small-leaved hawthorn (Crataegus monogyna), common spindle (Euonymus europaeus), and wild rose (Rosa canina).

Roman Forest is state-owned forest; it is used as a forest for special purposes and public benefits, and it is included in the existing infrastructure within the forest area.

Consider the maturity of the individual units in Roman Forest and in accordance to certain biological and taxonomic indicators (overgrown condition, basal area, number of trees per area unit), in the near future it will be necessary to do the necessary interventions that will allow giving green recreation under the condition that these procedure will not disturb its stability, biodiversity, and above everything, all the beneficial functions it provides.

This short educational content provides only basic information about this exceptional natural treasure, a place where you can feel the cultural atmosphere and history of one nation; here you can see all natural beauties of a tiny but precious corner of our country – our Roman Forest.
FOREST INHABITANTS - AMPHIBIANS AND INSECTS

AMPHIBIANS

The first terrestrial vertebrates have appeared on Earth millions of years ago. It’s strange, for many people (and for the world of science) that amphibians have adapted to live on land and water. Amphibians are classified into three orders: ANURA amphibians - frogs and toads, CAUDATA tadpole amphibians – salamanders (smooth, lungless), and COCHLIDIAE caecilians. Amphibians are cold-blooded (ectotherms) and they mainly lay their eggs in water. Most kinds of these species go through metamorphosis from larva into terrestrial adult forms where life is closely linked to humid conditions in its environment.

One of the most beautiful, but very shy inhabitant of our forest is the fire salamander (Salamandra salamandra). According to local legend, if you stand on it, he will produce a certain smell, a smell easily become visible to the eye. If you are so bold that you could go blind just if you took it. Of course, these are just stories, but it is true that they are poisonous. Black and yellow coloration is a warning to potential predators (warning coloration) and the toxic glands are located at the back of the head. If we touch it, it will not harm us, but it is very advisable to avoid contact with the eye and nose mucous membranes or even with wounds on the skin. It is most active at night after rain, so he could find with delicious earthworms, snails and insects. With the arrival of warmer days we can hear the green frogs croaking (Pelophylax esculentus). During the mating season they can be seen in a true show as fertilization is external, in water.

Why are they important to us?

Amphibians feed themselves with insects and other invertebrates including those who are transmitters of many human diseases; their glands in the skin produce a varying number of compounds that are used for the medicinal production. They are important biocides – they indicate the quality of the environment.

CAUSES OF ENDANGERMENT

Habitat fragmentation and degradation, roads that increase mortality during their migration and dangerous chemical substances that end up in the water due to their activity. Since their skin is highly permeable to oxygen and water they are very susceptible to the influence of various pollutants.

PROTECTION

It has been recorded 20 species in Croatia which are all protected by the Nature Protection Act.

INSECTS

When we are talking about the most important forest inhabitants, insects (insects) have often been forgotten. They are the largest animal group that we found. Insects are almost all active, they have mouthparts adapted to their feeding habits and related to their feeding habits. Many beetles are plant feeders so they have organs for cutting and grinding, while others, specialized for piercing, butterflies for sucking delicious nectar and bees for lapping. With the top of their tongue they are able to melt the sugar, and then to suck it up. They are the main pollinators with humans and without them, crop damage would be massive. Some species of butterflies are so-called “door heroes” are actually highly developed jaws that help them to conquer a female. He is one of the largest insects in Europe and it is protected in our country. Some insects use chemistry as a defense system (the resemblance of one organism to another or imitating object in nature for protection) e.g. some butterfly species imitate other that are tastesless to predators. During the warm summer nights the females lay their eggs, since they release light signals to their partners, but also to warn that they are not tasty choice for eating. How do they do this? The cells in their light organ produce a substance (luciferin) that grows over the presence of oxygen. Their light is almost as bright. It is important to mention that the city light confuses them during their love call. They are an excellent example of an organism that can produce light. This phenomenon in nature is called bioluminescence. Many other adaptations they have during evolution and the science that studies them is called entomology. In addition to the fact that many plant species would become extinct without them, they are important in maintaining the diversity and biological balance in all ecosystems.
INHABITANTS OF THE FOREST - MAMMALS

Mammals (Mammalia) belong to a class of vertebrates (Vertebrata) and its main characteristic is that they feed their young with the milk which is secreted from the mammary glands of the mother. The essential characteristic of mammals is that their skin is covered with hair. Hair helps them to keep warm and it can also be used for communication. Mammals are also characterized by specialized teeth, well-developed brain; therefore, they are very adaptable and can change their behavior as a response to changing conditions.

It is believed that the first mammals appeared around 220 million years ago, during the Triassic period. Today, we use the term mammal for the group of animals that have a characteristic of producing milk to feed their offspring. Mammals are the most diverse group of animals, with more than 50,000 species described, and there are still many more to be discovered.

One of the divisions of mammals divides them into two groups: monotremes, marsupials and placentals. Monotremes (such as the platypus and the echidna) lay eggs and have a different way of mammalian reproduction. Marsupials (koalas, kangaroos) give birth to relatively undeveloped young, often residing in a pouch, while the real mammals give birth to a developed young.

By some distinctions we distinguish them as 26 orders of mammals: monotremes, marsupials (which include 7 genera), toothless, insectivores, tree shrews, dermopterans, bats, monkeys, lemurs, whales, mammals, even-toed ungulates, odd-toed ungulates, hyraxes, tachyglossids, pangolins, rodents, lagomorphs and elephant shrews.

With 101 mammal species, 90 of which are autochthonous, Croatia is among 8 European countries with the greatest mammal diversity.

In the forest of the Western Papuk, among the larger mammals lives deer (Cervus elaphus), roe deer (Capreolus capreolus), wild boar (Sus scrofa), foxes (Vulpus vulpus), badgers (Meles meles). For the small mammal species we can find here: fat dormouse (Glis glis), squirrel (Sciurus vulgaris), field vole (Microtus arvalis), hedgehogs (Erinaceus europaeus), common wood mouse (Apodemus sylvaticus), field mouse (Apodemus agrarius), and many species of bats (Chiroptera).

Deer (Cervus elaphus) is considered as the largest deer species, and it is also called as a red deer. The deer are a genus of hoofed mammals belonging to the family Cervidae. The deer are herbivores and are mainly found in Europe, Asia, and North America. The deer can be found in the area between Morocco and Turkey in North-Western Africa. In Croatia, the largest number of this species is found in the region of Slavonia, Baranja, and Posavina. Deer are known to reach a weight of 350 kg at an adult age.

Because of its beauty, we call them the kings of our forests. It feeds on grass, heather, acorns, mushrooms, bark and various fruits. The main danger for deer is the traffic, which can lead to the death of over 130 deer every year in the forest.

In the area of Europe and Asia, but there are numerous in Ireland, Corsica, Sicily, Sardinia and Greece. Roe deer are predominantly located at the forest edges with meadows and fields. Roe deer are very adaptable animals and they can often be found in the woods, but also in open areas near the forest. Roe deer are known to feed in the evening and in the early morning hours. Adult roe deer can run up to 60 km per hour. They can also adapt to the conditions of the environment and vary their diet depending on the season. For example, in the winter they will feed on grass and turnips.

Wild boars (Sus scrofa) are close relatives of domestic pigs that live in packs, and they settle in the areas of Europe and Asia. By the way of their nutrition, they are omnivores, they eat roots, acorns, chestnuts, corn, wheat, and also worms, insects, eggs, frogs and mice. They are highly adaptable species, and because of their omnivorous diet, they need to find food, such as truffles and even they are used for police purposes. Their weight varies according to season and can exceed 300 kg in the case of the male wild boar, while females can be 150 kg.

Wild boar is a nocturnal animal; during the day it is usually resting in the bushes.

Edible dormouse (Glis glis) lives in European deciduous forests, and it can be often found in parks and orchards. It is 10 cm long and covered with thick fur; this fur is grey from top and white from bottom. He makes his nest from roots and mostly in the deep hollows or rock crevices. Its hibernation period lasts for 7 months, and it lives in communities. They feed on fruits, berries, seeds, larvae, insects, small mammals, eggs, and sometimes on plants. Squirrel (Sciurus vulgaris) lives in forests, parks and gardens; it is active during the day. It builds its nests in trees; the interior is a place for hiding and feeding young squirrels. Squirrel doesn’t hibernate during winter; they occasionally wake up; the main food are: berries, fruits, mushrooms, eggs, seeds and young birds.
RIMSKI IZVOR (JULIJEV IZVOR)  
ROMAN SPRING (JULIE’S SPRING)

Rimski izvor (Julije izvor), nalazi se u podnožju neakmejskog stamenkog dijela rimskega mjesnog dijela Aquae Galericae. U rimske izvor dobio je po rimskom arheološkom nalazištu kojim su se ove prolazne od 18. stoljeća. U rimske izvor (Julije izvor) učesnici sudjelovale su u mnogo kuća prema vlastitom grobu Julije Jankovića Đurđevstarom (1820.-1904.).

O rimskim arheološkim nalazištem prve jezivot J. Cosplovic. Godine 1819. je zapljušten. “Iznad Rimskog bonara nalaze se tri zidane stare grobne koje nisu presvećene, ali su ukrasljene mosaikom. Prije 30.-40 godina ove su pronađene razne rimske stotine i podanke su u Petrin. To je bila jedna kraja, zlatne narodnice, jedna zlatna nagrada s drapaju kamenjem i jedna mrtvica glazba.”

Za ovaj podatak treba zasigurno vezati arheološki nalaz dijastirnog pehara, vrlo dragocjenog rimskog arheološkog-umjetničkog artefakta, prema iskustvima najstarijih znanstvenika godinu 1794. u Đurđevstari. I najstariji arheološki nalazi iz privatne zbire u Budimpeštu 1904. dospio je u Belči dovoljeni muzej (Kunsthistorische Museum Vien). Đurđevstari dijastirni pehar kod nas je prvi publicirao G. Szabo 1932. i nazvao je “dijastirni u Đurđevstari”, odnosno i najljepšeg spomenik rimskog Đurđevstari i “dijastirnu kupu.” Danas se dijastirni smatraju peharam koji su obojeni reakcijom kolorom koja je izvrsena iz dvostrokovog stojećeg tijela. Dvogodišnjeg nalaza izvodi svakog mjeseni石油化工 koji su učesnici izvornice. Rimski vratni Ugljan (oko 200. pr. Kr.) navodi da su dijastirni peharteri radnici i lijevka te da obrtnici - umjetnici poradi različitosti izrade nisu htjeli narodima odgovarati za žetvu ako bi se pehari koji su prve su korišteni na brakovanju prislo postao almena. Iz takvog radnog procesa cene Konstantina iz 357. godine cita se o 56 vrata raznih obrtnih i umjetnika koji su oslikavali gradskih nameta da bi što slobodnije u svom umjeritosti mogli usporavati svi i svog narodnog, a mada njima se navode i dijastirani. Dimenzije Đurđevstari pehara su širina 89 mm., dubina 89 mm., visina 57 mm., dubina stijene 1,5 mm. Pehar ima tri reda oka, a sadrži natpis “FAVETIVS” što znači “slaviti.” Potpuna retakcija natpisa je „FAVETIVSCHIEM CHIRUSIEM CHIRUSIEM.“ (Marginalna bogoslovna ili Iskrijenima pripadateljica.)


U rimska gradna struktura, izvan gradskih zidina, uz ceste koje su vodile izvan grada, prema rimskim običajima nastale su nedopoljena – grobja. Rimska Zaka...)
<table>
<thead>
<tr>
<th>NAZIV</th>
<th>MJERNI JEDINICA</th>
<th>MDK**</th>
<th>VRJEDNOST</th>
<th>ISPRAVNO</th>
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<tr>
<td>Temperatura</td>
<td>°C</td>
<td>25</td>
<td>16</td>
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</tr>
<tr>
<td>Mutnoća</td>
<td>NTU jedinica</td>
<td>4</td>
<td>1,8</td>
<td>da</td>
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<tr>
<td>Boja*</td>
<td>mg/l Pt/Co ska</td>
<td>20</td>
<td>(pH 7,4) &lt;4</td>
<td>da</td>
</tr>
<tr>
<td>Miris</td>
<td>bez</td>
<td>bez</td>
<td>bez</td>
<td>da</td>
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<tr>
<td>Okus</td>
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<td>bez</td>
<td>bez</td>
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</tr>
<tr>
<td>pH*</td>
<td>pH jedinica</td>
<td>6,5–9,5</td>
<td>(t.m. 24,8°C) 7,0</td>
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</tr>
<tr>
<td>Elektrovodljivost*</td>
<td>μS/cm pri 25°C</td>
<td>2500</td>
<td>(t.m. 24,1°C) 863</td>
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<tr>
<td>Utrošak KMnO₄</td>
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<td>1,3</td>
<td>da</td>
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<tr>
<td>Kloridi*</td>
<td>mg/l Cl</td>
<td>250</td>
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<td>Nitriti*</td>
<td>mg/l NO₂</td>
<td>0,5</td>
<td>&lt;0,14</td>
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<tr>
<td>Nitrați*</td>
<td>mg/l NO₃</td>
<td>50</td>
<td>18</td>
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<tr>
<td>Amonij*</td>
<td>mg/l NH₄⁺</td>
<td>0,5</td>
<td>&lt;0,12</td>
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</table>

**MIKROBIOLOŠKI POKAZATELJI**
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Escherichia coli</td>
<td>cfu/100ml</td>
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</tr>
<tr>
<td>Utupni koliformi</td>
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<td>ne</td>
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<td>Enterokoki</td>
<td>cfu/100ml</td>
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<td>0</td>
<td>da</td>
</tr>
<tr>
<td>Broj kolonija 37°C/48h</td>
<td>cfu/ml</td>
<td>20</td>
<td>3</td>
<td>da</td>
</tr>
<tr>
<td>Broj kolonija 22°C/72h</td>
<td>cfu/ml</td>
<td>100</td>
<td>30</td>
<td>da</td>
</tr>
</tbody>
</table>


**DALJNJA KONZUMACIJA NA VLASTITU ODOVRONOST!**

The tested sample „water for drinking“ examined on July 30th, 2014 is NOT in accordance with the necessary requirements in law article nr. 7 of the Ordinance book on compliance parameters and water analysis methods for human consumption (NN 125/13, 143/13).

**FURTHER CONSUMPTION AT YOUR OWN RISK!**
STANOVAČCI ŠUME - PTICE  
FOREST INHABITANTS - BIRDS

Ptice (Anas) su dovoljno toplolevki krajolikici koji poslije jača sa čestim živjekom, a tijelo je je prehrano perjani. One su svjesni što je najbolje prilagoditi smanjenje živja, od današnjeg vremena pa sve do danas. Ptice su odjavljeni kari bijeljača u svijetu, a današnje otočne proizvede novi prinioci za biologiju - ptice. 

Promatrajući kostar ptice, mnogi monstavaju tordre da su ptice nastale od dinosauria. Mišljenje koje je izrazilo većinu znanosti je da su ptice nastale od današnjih dinosaurijskih ustanovica, a današnje ptice su njihove nadomjere. Dvostruko se izrazilo većinu znanosti je da su ptice nastale od današnjih dinosaurijskih ustanovica, a današnje ptice su njihove nadomjere. 

Mnoštvo ptica raste sveže godine brzo na selu ili u sušu zraku, a još više je ptica poduzeca migracija koje su kroz druge redove odnote. Ptice su društvena bića i komunikiraju putem zvuka, motora, plesa, tijela i preuzimaju toplinu kroz protvor. 

Zanimljiva je dirzina da ptice jedu mnogo više od čega drugiz Bog stvorio. Nije jedan ptica izgubio svoj život zbog brize, brine ili tijela težine ptica bilo. 

Od 20 do 40 ptic jestormo je kao rezultat hladnog djelovanja od 3000 godina, a prije toga još 13. Danas mnogim vrstama ptice prijeti isumravanje zbog različitih čimbenika, uključujući industriju, prihvat, preuzimajući toplinu kroz izgovor. 

Stanovište je za ptice jedu mnogo više od čega drugiz Bog stvorio. Nije jedan ptica izgubio svoj život zbog brize, brine ili tijela težine ptica bilo. 

Šume Zapadnog Papusa nastojaju množenje ptica. U Rimskoj park-djelovina je osnovano pet demešnih ptica, a množenje ptica je događaja koje se javljaju. Ptice su i različite vrste iz zaštite i zaštite. Od ptica koje su zaštićene i zaštićene je verovatno ukoštaj od ptica kojima je verovatno najveća površina za život. 

Španski biopolazak, ptica koja spada u porodicu vrlog (Passeriformes). Pripadnik je reda ptica, a kod nekih je sporo i neka. Ovo je ptica koji je verovatno najveća površina za život. 

Zelena ptica (Eurasian wren) je ptica koja je verovatno najveća površina za život. Ova ptica je verovatno najveća površina za život. 

Stav (Cinclus cinclus) je ptica koja je verovatno najveća površina za život. Ova ptica je verovatno najveća površina za život. 

Zeleni ciernik (Phalacrocorax carbo) je ptica koja je verovatno najveća površina za život. Ova ptica je verovatno najveća površina za život. 

Veselica (Sylvia exorta) je ptica koja je verovatno najveća površina za život. Ova ptica je verovatno najveća površina za život. 

Papuga (Psittacidae) je ptica koja je verovatno najveća površina za život. Ova ptica je verovatno najveća površina za život. 

Zeleni oiseau (Striated caracara) je ptica koja je verovatno najveća površina za život. Ova ptica je verovatno najveća površina za život. 

Ptice su dobri hrana i suzdare, ali ne znači da su bezbedne. Ptice su ugrožene zbog industrije, ljudi, zemlje, te zaštite. 

Zanimljiva je dirzina da ptice jedu mnogo više od čega drugiz Bog stvorio. Nije jedan ptica izgubio svoj život zbog brize, brine ili tijela težine ptica bilo.
Daruvarsko vinogorje is one of the 10 largest winegrowing regions in Slovenia. Winegrowing in Daruvarsko vinogorje started on the estates of the aristocratic nobility in the 15th century. Today, winegrowing is still an important economic activity, and the region is known for its high-quality wines produced from the traditional Slovenian grape varieties.

Daruvarsko vinogorje is located at the foot slopes and in the middle of the Slovenian and Istrian mountains. These are very rolling hills and low mountain terrains of Western Pohorje, located at 300-350 m above sea level. The vineyard is mainly on southern and south-western facing slopes where there is a higher amount of direct sunshine. The geological substrate is predominantly friable loam with clay admixtures, while the lower parts are covered with gravel and alluvial deposits.

Today, in this area grow many wine sorts that are used for production of high-quality wines. The vineyard is mainly on southern and south-western facing slopes where there is a higher amount of direct sunshine. The geological substrate is predominantly friable loam with clay admixtures, while the lower parts are covered with gravel and alluvial deposits.

In the vineyard, a rich variety of sorts is grown. Kranjska, Gross, Pinot Noir, and Riesling are the most popular varieties. The vineyard is also known for producing good-quality white wines, especially Sauvignon Blanc and Traminer.

Daruvar's vineyards produce a wide range of wines, from light and fruity whites to rich, full-bodied reds. The region is also known for its sparkling wines, which are produced using traditional methods.

The traditional Slovenian wines of Daruvarsko vinogorje are characterized by their rich flavor and aroma. They are known for their quality and are appreciated by wine lovers around the world.
ŽIDOVSKO GROBLJE  
JEWISH CEMETERY

In the eastern part of Roman forest, along with Vinkovci road, in 1860 was founded a Jewish cemetery with the ownership rights by Israeli Municipality Daruvar. The cemetery has an area of 1 670 m² and it is harmoniously placed in a forest area, with a view from the northern and eastern side. In the eastern part, there is a part of the unused land, with a gift agreement in 1972 the area of 275 m² was transferred into the citizen ownership of Zlatko Bienefeld. With that, the cemetery area was reduced to 1 395 m². In 2010 the regional Institute for Protection of cultural monuments from Osijek, on 24th January 1973, this cemetery was marked as a cultural monument of the fascist terror victims.

The cemetery is 70 meters long and 20 meters wide. It is made of 160 gravestones, nearly hundreds of them have partial or complete inscriptions in Hebrew script, and they have marks of stone star or weeping willow.

The graves are numbered collectively or individually based upon the formation criteria, or readability, or even according to the hierarchical importance of certain members in Jewish community, as you can see in the inscriptions on monuments.

The difficulties regarding the precise determination of older graves or monuments group; arising from the fact that the newer gravestones date from period between two world wars, and after the World War II the gravestones were built both in the older ones, which is understandable, since the deceased were buried close to their ancestors or relatives. One part of the gravestones has an inscription in German language, while others have inscriptions in Saracen and Croatian language.

The oldest gravestones certainly date from first half of the 19th century, they were transferred here from Jovane Polje ("The Glass Factory), and only that is recognizable on these gravestones are just on occasion letter or number. Among the preserved gravestones are also those which belong to family Pollak, they were a landowner and merchant family; they were among the most prominent families in Daruvar until World War II. The gravestones of renewed Rabbi from Daruvar, Rabbi Gross is also preserved, along with the gravestones in the newer part, where the graves of Rabi family are located.

In the centre of the western cemetery part there is a monument dedicated to the victims of fascism with the text: "In memory of Jews from Daruvar who have died in concentration camps 1941-1945". It contains 53 names, with children names or names of married women, and the names of Jewish refugees who remained in Daruvar, as they came here from Austria or Hungary; quite about 250 victims.

The cemetery is maintained by current President of the Jewish community. The Sha'arit z'atom service takes place on the graves of deceased, in the presence of rabbi and rabbinate and the congregation, as it befits any religious ritual.

Don't be astonished with the little stones or grave monuments. They are signs of deep and sincere respect for the deceased; in the spirit of the Jewish faith this is a way to pay a tribute to them with the act of leaving small stones on the grave. Don't hesitate; you can also leave a small stone on the grave of your relatives, friends, or even strangers because in that way you prove the gentleness and the size of your own heart and soul.

David Frankfurter

David Frankfurter, who was the son of a Daruvar rabbi, was born in 1909 also in Daruvar. He studied in Switzerland, and in 1936 he shot a Nazi officer. His act was remembered in history as one of the first indicators of resistance shown through Styria towards the Nazi terror. In a loving manner, after his name were named many schools, squares, streets and parks across the whole world.
DOBRI ŽELENI DUH JANKOVIĆA DARUVARSKIH
THE GOOD GREEN GHOST OF THE FAMILY JANKOVIĆ DE DARUVAR

Grad Daruvar s brojnim priznanjima kao najljepši zeleni grad, svaku prepoznatljivost uvelike temelji na svojim parkovima i šumskim površinama. Ovo obeljjezje daruvarske identiteta ponosno možemo zahvaliti arhitektonskom obiljacu Jankovica Daruvarskih.

To saznajemo iz više povijesnih izvora, jednu od njih je stručno-znanstveni putopis M. Pillera i L. Mitterpachers iz 1873. godine Ovaj zanimljiv putopis pripada stručnim djelima koji nam otvaraju o svim užetim u rezkoj ricižnosti, mazuljci i vukovi. Šume su od znamenitog značaja za ovaj kraj. U vrijeme grof Antuna Jankovica (1729. - 1789.), kada drugi putopisci, F.W. Tauer opisuje损耗ze 1777., donima se osnovna struktura šuma, građena na pretpostavki novoantičkog umjenskog naselja. Uzgrojene su u zemljičkoj i zeleno, ne u vrućini, a zemlja se ukrštao neprestano novim cvjetom. Šume i dvorane sa se dobije od hrastana, bukve, bijele, topole, jake, crne i bijele šumljave i drugih manje zastupljenih vrsta. Najveća koristi su donosiše korištenje šuma. To je toga debla, što znači da su šuma uglavnom naplaćene sekcijama. Fason je raznolik: lisice, strane, vukovi, polubi rizi i mazujoći od grobljevina. Osim ostalih štovina mogu se računati i jasan i voća koja ih uživa.

Tauer piše da ništa nije prijetnja od pogleda kroz prozore Antunove palače. Tog pogled obuhvaća parka, zelena poljena, livade, šljive, niske šume koja obveštale ljetnom listom, rosne se i zlote, stabla koja potječe, potkove koji zmiješali tenko i na kraju pogled zatvaraju visokog lebdenja. Grof Antun Janković prepoznaje je i u istom znamenitoj značajnoj daruvarskoj identiteti kupatoral-stropčevog dimenzija. Idealne uvjete za rast i razvoj ovog drvenog gospodarstva, multičlanstvo je funkcionalno, evoluijski srčanost arhitekture. Njegov nasjednik i brat Ivan Janković (1731. - 1786.) osnovao je privrednu inicijativu te se na njegovo povijesno stvaraju jedno od kvalitetnijih stoljeća. Ovaj izgled je i u odnosu na velike površine počeo se održavati od 17. stoljeća. Grof Julije Janković (1820. - 1860.) izvrsništvo i zahvaljuje se na rastu površine zemlje i zemaljskog površine u odgovoru na nezamjetan javni gospodar. Grof Julije značajno je posvećen na izgradnju i održavanju naselja. Njegova izazov je i najviši daruvarski povezujuci, u kojem jedna od starih grobnica ugroži vremenu izgradne (Rimskom izvori), koja nalazi se u rimskom žitvu.

Ovo zeljež ljudi Daruvaru zove se tako zbog brojnih ruskih ostataka nadodan ispod višestoljetnog lišća, rimskih, bencaničkih grobovima i razni artikulacije. U njegovom gospodarstvu djeluje nalazi se u „Zuđkovci“ groblje nastalo u židovskom vremenu.

Najveći povez sa prastiastim Ivan Janković je i u njegovo vrijeme moguće 10. jutra i 18. stoljeća sastojak. Tjajeva s Rimskom žitvu, koja djeluje često i pravi praznici koji pokrivaju povijesne i pogleda, povijesne znanstvene pojedine. To značajno dojma da je snašažen u Arhidiokaza, mališan zemlja u središtu Peloponeza, arheološko mjesto u pravcu, koje je u velikoj i obuhvaća neku, a na kraju i Zlatuš. Značajno je otkriva vodom Antunove izvori iz Julijevo povijesno, a jeti rashladiti svjetložiraju.

Zbog kroz struje zemlja prijelazak naselja i kod istraživača druge građe smiješa se kroz životinske vrste, nestali su riviči, mazuljci i vukovi, tosto da su ispunili mnogo arhidiokaza svojstva ovog kroga. Ipak, ispunili su za svaku svetinju šumskou površinu, što predstavlja znamenitost ekološki i prirodnih resursa.

Uzgrojene su u zemljičkoj i zeleno, ne u vrućini, a zemlja se ukrštao neprestano novim cvjetom. Šume i dvorane sa se dobije od hrastana, bukve, bijele, topole, jake, crne i bijele šumljave i drugih manje zastupljenih vrsta. Najveća koristi su donosiše korištenje šuma. To je toga debla, što znači da su šuma uglavnom naplaćene sekcijama. Fason je raznolik: lisice, strane, vukovi, polubi rizi i mazujoći od grobljevina. Osim ostalih štovina mogu se računati i jasan i voća koja ih uživa.

Taun writes that nothing is more comforting than a look through the window of the Antun’s palace. This view includes a park, green fields, meadows, orchards, low forests that are overgrown with gorse and brambles, small villages and farms, grazing cattle, streams that flow in serpentine and in the end the view is closed high hill. Antun has recognized and he established the final resting place of the city Daruvar identity, the spa and swimming dimension, the ideal conditions for the development of parks and wood industry, multiculturality and above all the functional and aesthetic architecture. His successor and brother John Janković (1737. - 1798) has enabled preserved many of the buildings and created on his estates one of the most prestigious glassworks for whose work was necessary the forest in the Daruvar area. His son Julije Janković (1820. - 1860.) is a prominent politician, the protector of culture and the embodiment of this area, his main focus being on the strengthening of the local economy and entrepreneurship.

This green “lunge” of Daruvar are called so because many of the Roman artefacts were found here under the centuries old leaves (Roman rampart, Roman road, ancient roads, towers in the area). Daruvar also has a Jewish cemetery founded during the life of Julije Janković.

The largest park there with regular rose bushes carries the name of Julije, because in this time the park was spread across 17 acres and 1087 square foots of land. This park along with the Roman Forest is divided by the road and railway, it is the real ecological pearl that attracts the visitors and makes them every day.

The condition of park gives the impression that we have lost many in Arcadia, the mythical land in the centre of the Peloponeza, an archaeological place in the world, which is fertile and surrounded by forest, home of the god Poseidon and the nymphs. In winter you can always enjoy with warm water from Antun’s spring, in the summer you will find refreshment at Julije’s spring (Zulubren).

Due to deformation during the foundation of new settlements as well as the destruction of time, most of the plants, such as syringes, bears and wolves have disappeared, so many of the Arhidiokaza features of this area were lost. Nowadays, there are preserved large areas of the forest, which represents a significant ecological and aesthetic resource. It shows us that Bilić is still hugging nymphs with a smile on his face, nymphs in the form of frames in this region.

The final resting place of Julije and Ljudevit Janković is at the cemetery in Aachenkirch, Austria; it is adorned with gilded twigs from Slavonian forests, which shows the connection of gratitude between family Janković and the trees and forests from this region.

Tjekom svibnja, a ponekad i kratko travnja, počinju u šumi cvastiti prve orhideje - bijele nlagovice (Galaunsethera damaomun) i dugotakme nlagovice (Galaunsethera longifolia). Razlikuju se po dužini listova i po cvjetovima. Kod bijele nlagovice lišaj na listi i bri koji su u dugotakme lišaj na cvjetnim cvjetima.

Dugotakme ima bijele i rone cvetove. Cvastu do sretnja. (Slika 1.)

Gotovo u listopadu, raste cvasti jajoliku čopac (Listera ovata) i šumski koška (Neottia nidus-avis). Cvastu u cijenjena i piše.

Jajoliku čopac ima dva jajolika lista između kojih raste stabljiku na kojoj nagnuti svijetlo zelenih cvjetova. Rast se omeđuje u odraslo bilje i traje do 15 godina. Najuglednijem je, a pojedini su primjeri uživaju 60 godina. (Slika 2.)

Šumski koška nagnuta je na kojoj je nagnuta zelena cvetovna raste. Nagnuta zelena cvetova je u cijenjena i cvetljata cijenjena. Naraste do 40 cm, a u posebnim uvjetima može cvjetati godinama. (Slika 3.)

Po svibnju u šumi raste neke neznačajnosti koje su cvaste od vreća do rječja. Prva cvasta slnjkovina koška (Epipactis microphylla), tijekom svibnja i lipnja. Rasprostranjena je u svim dijelovima šume. Listovi su maloljetni i uži, a mali zelenski cvetovi stražira mlađe zrnovine. Visok je od 10 do 40 cm. (Slika 4.)

Najuglednijem je slnjkovina koška (Epipactis microphylla), tijekom svibnja i lipnja. Rasprostranjena je u svim dijelovima šume. Listovi su maloljetni i uži, a mali zelenski cvetovi stražira mlađe zrnovine. Visok je od 10 do 40 cm. (Slika 4.)

Od nagnutih koški veća je jedina sprongaljina koška (Epipactis helleborine) koja može biti visoka do 120 cm. I ona je rasprostranjena u svim dijelovima šume, u kojoj i znanjima koška cvaste od rječja do košeluoka. (Slika 5.)

Vjerojatno najjednostavnije je purpurna koška (Epipactis purpurata). Pojedini primjeri imaju razvoj ljubičastog stijenjatkoj lišaju i listovima, a cvjeti kao kod ostalih koški zelenkasti, ali s ljubičastom mješavinom. Cvastu u crvena i koloru. (Slika 6.)

Postotnoju po redu cvastne je u svim koški - Nordenova koška (Epipactis nordeni). Raste na vlažnim mjestima, a visok je od 1 do 30 cm. Čak i najznačajniji primjeri imaju po nekoliko cvjetu. Cvaste do sretnja do rječia. (Slika 7.)

Svih naših samoandžkoboršćim orhidejama zajednička je da su jakom strogo zaštićene (katagorija S3 - strogo zaštićene svijetle) i nismo ih dozvoljavali do drugih naših savršeto pristupu

A special place among the flora of the Roman park-forest belongs to the orchids. All orchids belong to the large family of Orchidaceae. It includes more than 600 genera and even 30 000 species. In Europe, you can find around 600 species of orchids, and in Croatia there are about 150 indigenous species. In Roman park-forest, on the area of only 20.43 hectares, at least 9 species of orchids are growing at the same time.

During May and sometimes even at the end of April, the first orchids in the forest begin to bloom - White Helleborine (Epipactis helleborine) and Sword-leaved Helleborine (Epipactis longifolia). They are different in the length of the leaves and flowers. White Helleborine has shorter leaves and longer flowers than Sword-leaved Helleborine, while Sword-leaved Helleborine has more flowers and they are much whiter. They bloom until July (Picture 1 and 2).

Almost at the same time (in May) Common Twayblade (Listera ovata) and The Bird's-nest Orchid (Neottia nidus-avis) begin to bloom. They bloom in May and June.

Common Twayblade has two oval leaves and between them grows the stalk which has long green flowers on it. The growth of the plant from seed to mature plant lasts up to 15 years. This sort is most frequent in the upper part of the forest, and some of the specimens were taller than 50 cm (Picture 3 and 4).

The Bird's-nest Orchid (Neottia nidus-avis) is a very unusual plant because of its color - it has no chlorophyll, so its stalk and flower are brown; that's why the whole plant looks like it was made of wax. It grows up to 40 cm, and in special conditions it can flourish in the underground (Picture 5).

According to the number of sorts in the forest, the most common kind is Helleborine (Epipactis). Five sorts which bloom from May to September belong to this kind.

Small-leaved Helleborine (Epipactis microphylla) blooms first, during May and June. This sort is widespread in all parts of the forest. It has a few narrow leaves, and small greenish flowers which smell very like vanila. It is tall from 10 to 40 cm. (Picture 6).

The most widespread orchid is the forgotten Neglected Helleborine (Epipactis neglecta), it grows in all parts of the forest, sometimes even in groups made from 20 individual plants. Some of the examples are up to 50 cm tall. (Picture 7).

Only Broad-leaved Helleborine orchid (Epipactis helleborine) is bigger than the Forgotten or Neglected Helleborine, it can reach its high up to 120 cm. This orchid is also widespread in all parts of the forest, as well as the Neglected Helleborine it blooms from June to August. (Picture 8).

Probably the most beautiful among the Helleborine orchids is the Violet Helleborine (Epipactis purpurata). Some specimens are distinguished by distinctive purple stalk and leaves, but the flowers are greenish just like the other Helleborine kinds have, but only with a purple honey lip. It blooms in July and August. (Picture 9 and 10).

The last in a row of flowering is also the smallest Helleborine - Norden Helleborine (Epipactis nordeni). It grows in moist places, it is tall from 5 to 30 cm. Even the smallest specimens have few flowers. It blooms from July to September. (Picture 11 and 12).

A common thing for all of our wild orchids is that they are strictly protected by law (category S3 - strictly protected species) and they should not be picked from the park or destroyed in any other way.
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