

About the municipality

The municipality of Radenci is located in the north-east of Slovenia along the Mura River and has approximately 5200 inhabitants living in twentytwo settlements. Radenci is a well-known health resort with one of the richest and highest quality water areas in Slovenia. Radenci is known for its popular and world-famous mineral water, called Radenska. Radenci was first mentioned in 1436, and was recognised as a health resort in the 19th century. Karl Henn discovered springs here in 1833, the first clay bottles with mineral water were filled in 1869, while the spa began in 1882.



Healing spring, source: Radenci Municipality

Sources and literature

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Presentation of the project and the entire tourism product



Presentation of the learning ground



Stone-to-Iron Themed Learning Path



Cultural and natural heritage in the wider local area



Contact details

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Learning Path: "From Stone to Iron"



Longer route: 4km, circular route

Course: Learning ground (platform in front of the bank and post office) - Copper Age (healing spring) - Bronze Age (statue of the Three Graces) - Iron Age (CO2 bath spring) - Learning ground (platform in front of the bank and post office).

Shorter route: 2.1km, not a circular route

Course: Learning ground (platform in front of the bank and post office) - Copper Age (healing spring) - Bronze Age (statue of the Three Graces) - Iron Age (CO2 bath spring) - Learning ground (platform in front of the bank and post office).

How do you get more information?

Use your mobile phone to photograph one of four QR codes on a prehistoric information monument located on a platform in the heart of Radenci. The contents of individual codes include:

- presentation of the project and integrated tourism product,
- presentation of the learning ground,
- Thematic Learning Path "From Stone to Iron"
- cultural and natural heritage in the wider local area.

Learning Path, by Luka Ajlec



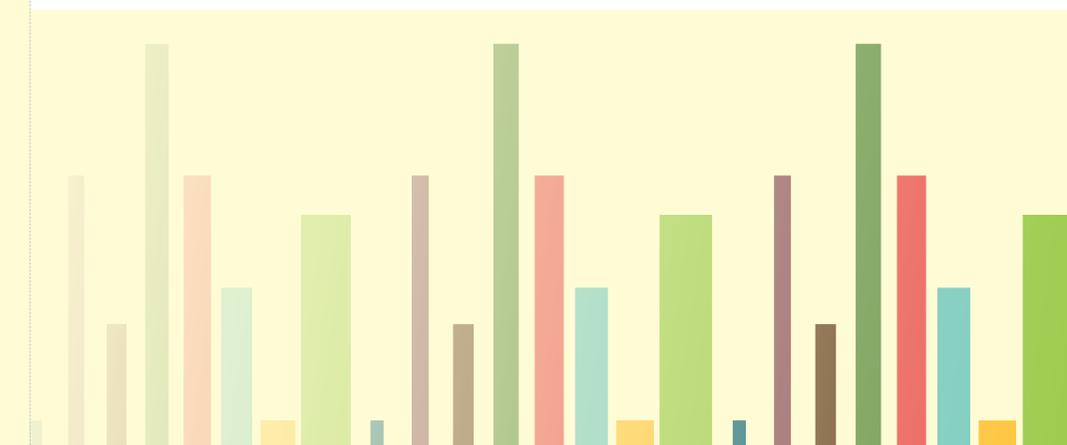
Občina
Radenci



**PREHISTORY
ADVENTURE**



Interreg
SLOVENIA - CROATIA
European Union | European Regional Development Fund



Stone hammer-axe, source: Radenci Municipality

"From stone to iron"

Why are we talking about archeological sites in Radenci?

The following partners are involved in the project: Municipality of Donja Voča as lead partner, Municipality of Zreče, Museum of Turpolje, Archaeological Museum of Zagreb, University of Ljubljana and Municipality of Radenci.

The project "Prehistory adventure - an experiential walk through the heritage of prehistory" is supported by the European Union and co-financed by the European Regional Development Fund under the Interreg V-A Slovenia-Croatia 2014-2020 Cooperation Programme.

1 Prehistory

Timeline

The platform contains six large pieces of sandstone, representing six prehistoric periods, divided into the Stone Age and the Metal Ages. The Stone Age is divided into Old, Middle and New, whereas the Metal Ages are further divided into Copper, Bronze and Iron Ages. The largest sandstone represents the Old Stone Age and the smallest represents the youngest prehistoric period, the Iron Age. Among the stones stands out the model of the smoothed stone axe, characteristic of the New Stone age.



Learning Ground, by Miran Fekonja

Old and Middle Stone Age

The Old Stone Age began 2.5 million years ago. During this period, several species of human emerged and developed, including the wise man (Homo sapiens), which is the only surviving species today. An important feature of this period were the ice ages, interrupted by the intervening warmer periods.

In Slovenia, we have the first clearer evidence of settling from the time of 250,000–40,000 years ago, when Neanderthals inhabited Europe and the Middle East. Neanderthal stone and bone tools were preserved, and they also made wooden tools.

40,000 years ago, the Neanderthal was replaced by modern humans who settled in other parts of the world from Africa. They brought with them new ways of stone and bone tools manufacture, and developed forms of artistic and spiritual expression.

About 11,500 years ago, the climate began to warm up, glaciers began to disappear and forests spread. This period is called the Middle Stone Age.

In Radenci a perforated stone hammer-axe made of grey-green granular stone from the Early Stone Age (4000 years B.C.) was found when unloading the gravel dug from the "Mirova gravel pit". The axe is 11.8cm long, 4.5cm wide and 5.5cm thick. The find is stored in the Maribor Regional Museum under inventory number 2916.

People have always been interested in what is behind the hills, mountains, on the other side of streams, rivers and seas. I know you are also interested in what you will be able to learn on this prehistoric adventure.

You will learn about the development of prehistoric periods in connection with the recent history of spa tourism in Radenci on the educational journey "From Stone to Iron". The trail leads to the protected area of the settlement, garden and architectural heritage and Natura 2000. Your task is to use the map to find points along the educational route and experience and feel the richness of the area.

2 The New Stone and Copper Age

Why is the Copper Age area here?
Due to the copper roof at the mineral water spring.

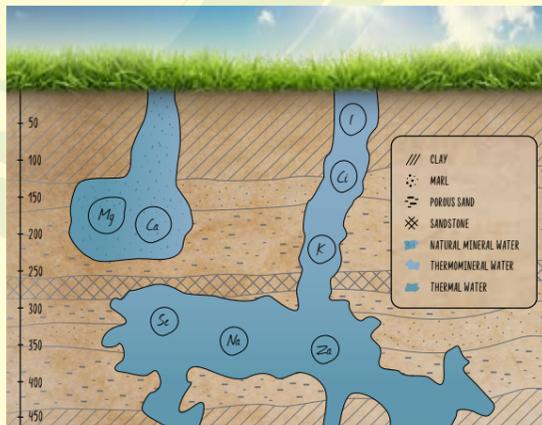
During the New Stone Age, people abandoned the hunter-gatherer way of life and developed agriculture and animal husbandry. Life was increasingly taking place in permanent settlements, and pottery became an important craft. The oldest sites from that time in mainland Slovenia date after 4700 BC. The finds show that they grew barley, wheat, peas and broad beans and raised cattle, sheep, goats and pigs. They also made fabrics for which they used plant and animal fibres.

Shortly thereafter, the inhabitants of our region also gained knowledge of the extraction of metal. Copper was extracted from the copper ore and then melted and cast into stone or ceramic moulds. The stone tools were still in general use. Among the more characteristic finds of the New Stone and Copper Age are stone axes, which were smoothed with the help of sand and water and a hole could be drilled into them to secure the handle.

The wider Radenci area, from which natural mineral waters originate, is composed of Tertiary marine and freshwater sediments of the former Pannonian Sea or lake. The clay and marl layers protect the aquifer, under which there are layers of sandstone with natural mineral, thermomineral and thermal water. (Ivanišin, 2012).

The beginnings of Radenci's development go back to 1833, when Karel Henn, then a student, went on vacation to Ljutomer. Along the way, the coachman drew his attention to a strong murmur at the water spring. On his return home, he also took a closer look at this spring and found it to be a spring of mineral water.

Henn carried out an initial analysis of Radenci mineral water, finding that it contained many medicinal substances and carbon dioxide. In 1865, he decided to buy the land himself and capture the springs. After four years, mineral water first came out of the pipe, and the owner Henn named his first spring as the Radeiner Sauerbrunn or the Main Spring (Kovič, 2001).



The course of how mineral water is formed, source: Radenska, d. o. o.



The Healing Spring, by Miran Fekonja

3 Bronze Age

Why is the Bronze Age area here?
Due to the bronze statue of Three Graces.

Bronze is an alloy of copper and tin. Harder than copper, it has a lower melting point, while also allowing the casting of objects of more complex shapes, it became the most popular material for tools, weapons and jewellery. The production of bronze was also important for the development of long-distance trading, as tin deposits are especially rare.

The Bronze Age can be further divided into Early (ca. 2300 to 1600 BC), Middle (ca. 1600 to 1300 BC) and Late (ca. 1300 to 800 BC). In the Early Bronze Age, the first major increase in lowland settlements was observed in Pomurje, during which time a typical pottery decorated with cord impressions appeared. In the Middle Bronze Age, the area of eastern Slovenia belonged to the so-called Tumulus culture. A major cultural change ensued as the method of burial changed completely. The deceased began to be cremated and the ashes were buried in urns in smaller grave pits.

This method of burial continued into the Late Bronze Age, characterised by large burial grounds with hundreds of burials. The period is therefore also known as the Urnfield culture. Changes in material and spiritual culture also led to a transformation of the settlement pattern, as hillforts in strategic places (e.g. castle hill in Gornja Radgona) appeared along lowland sites.



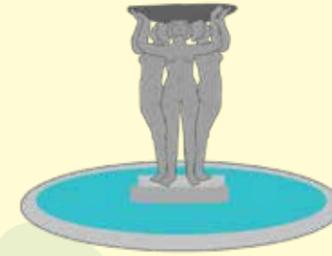
Clay bottle, source: Radenska, d. o. o.

The history of mineral water begins in 1869, when Henn captured the first spring known as the Radenci Spring or the Main Spring, which marks the beginning of the exploitation of mineral water. Some 37,000 clay bottles "slatinke" were filled.

Radenci Park is part of the town's architectural and garden heritage. The spa park was created at the same time as the spa complex, and the first landscaping was arranged. In 1936 the so-called Sun Park was added. It was designed in the form of a circle in a square by the then renowned garden architect Ilse Fischerauer. The park is her only preserved public garden in Slovenia. Only individual trees and some of the oldest tourist buildings in the town have been preserved in the park to date (ZTIŠ, 2020).

The Chapel of St Anne in Radenci Park was built by Karl Henn's widow, Ana Henn. The chapel was built in 1895 with a neo-Gothic transept and facade bell tower. In 1976, it was rebuilt. The tomb below the chapel belongs to the Wieltsching family, who are heirs to the Henn family. This tomb was moved from the Chapel Cemetery to the Chapel in 1973.

The chapel is adorned with the inscription: "NOT TO US, LORD, NOT TO US, BUT TO YOUR NAME GIVE THE GLORY. THIS HOUSE WAS DEDICATED TO ST. ANNE IN THE YEAR 1895." (Radenci, 2020)



Three Graces, by Miran Fekonja



Chapel of St Anne, source: ZTIŠ

4 Iron Age

Why is the Iron Age area here?
Due to the mineral water rich in iron.

The Iron Age is divided into the Early Iron Age or Hallstatt period (ca. 800 to 350 BC) and the Late Iron Age or La Tène period (ca. 350 to 15 BC). In the manufacture of tools and weapons, bronze was replaced by harder iron. However, its use in jewellery remained limited, as it does not allow for more complex design.

In the Hallstatt period, some of the deceased continued to be buried in flat cremation graves, but in eastern Slovenia and the wider region, that is between the Alps and Pannonia, earthen tumuli, often arranged in large groups, also appear at that time. Most of the settlements of that time were fortified and erected on higher locations. They are called hillforts.

During the La Tène period, many new developments in material culture also occurred together with the change of spiritual culture and funeral customs. Effective combat equipment such as long double-edged swords, spears, various helmets and shields should be highlighted. An important innovation in the production of pottery was the invention of the fast pottery wheel. At least since the middle of the 2nd century BC, the inhabitants of our region traded with the Romans and began to mint their own money.

Natura 2000 represents a network of protected areas designed by the European Union. The primary purpose is to conserve biodiversity by protecting the natural habitats of endangered plant and animal species (Natura 2000).

How are NATURA 2000 sites determined?

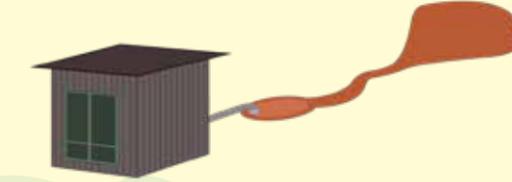
The areas are defined based on "The Bird Directive" (about the bird species) and "The Habitats Directive" (about the plant and animal species).

There are 355 designated Natura 2000 sites in Slovenia, of which 324 are designated under the Habitat Directive and 31 under the Bird Directive. The total area of the Natura 2000 area covers 37.46% of the total area of Slovenia, which is 7,681km², of which 7,675.5km² is on land and 5.5km² at sea (Natura 2000).

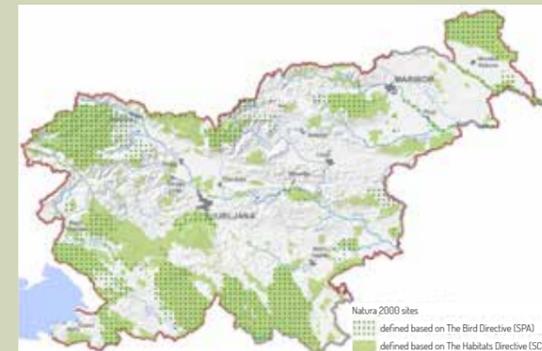
The area of Radenci Municipality covers 34.1km², of which 4.2km² are located in the Natura 2000 area.

The Mura River flows through the area of the Radenci municipality, originating at an altitude of 1898m in Austria in the Hohe Tauern National Park (High Tauern) in the Austrian state of Salzburg and is 445km long. (Globevnik).

The Mura area is extremely biodiverse: from the river bed itself with numerous river branches, oxbows, gravel bars, streams and flood forests to marshes and traditionally cultivated agricultural landscape. (Kikec).



CO2 bath spring, by Miran Fekonja



NATURA 2000 sites, source: Register of Natura 2000 sites, Environmental Agency of the Republic of Slovenia, 2016