



ZAVOD REPUBLIKE SLOVENIJE
ZA VARSTVO NARAVE

NATURA 2000 in the Branica Valley



NATURA 2000

What is Natura 2000?

Natura 2000 is a **network of special protected areas** gradually taking shape in all Member States of the European Union.

The goal of this network is to protect the most seriously threatened habitats and species across Europe.

Why was the Natura 2000 Network Created?

- Because of the diminishing the natural environment in Europe.
- Because, for this reason, many vulnerable animal and plant species are on the brink of extinction or have indeed become extinct.
- Because, if we wish to preserve our natural environment, Member States must take a common approach and designate protected areas for the most endangered species and different types of natural environment.

Natura 2000 in Slovenia

As other Member States of the European Union, Slovenia has also designated Natura 2000 sites. Different Member States have designated different numbers of sites of differing sizes, **depending on the state of environmental preservation in each country.**

Slovenia has designated **286 Natura 2000 sites**, covering almost 36 percent of the country's total area. In terms of the percentage of territory incorporated into Natura 2000 areas, Slovenia is **ranked first** within the European Union.

One of these sites is the Branica Valley.



Natura 2000 sites in Slovenia

BRANICA VALLEY

Why Natura 2000 in the Branica Valley?

Protected forests, untainted brooks and streams and nature-friendly farming in the Branica Valley provide a favourable **natural environment for numerous endangered animal species that are of interest to the European Union.**

What does the Branica Valley Area encompass?

The Branica Valley Natura 2000 site encompasses **the upper basin of the River Branica and the southern part of the Vipava Hills**, as well as the forest and grasslands of the **Karst between Kobjeglava, Škrbina and Tabor**, which is the feeding ground of the bats whose maternity colonies are domiciled in the Rihemberk Castle.



Branica Valley Natura 2000 Site

What natural environment is being protected in the Branica Valley Area?

- **Streams and other water bodies** that represent the natural habitat of endangered animal species, such as the Italian Agile frog, the Yellow-bellied toad, the Balkan Goldenring dragonfly, the Lombardy lamprey and the Ground beetle.
- **Forests** that are the natural habitat for rare species of beetle (the Stag beetle, the Great Capricorn beetle, the Beech Cerambycid beetle) and which are the feeding ground of endangered species of bats.
- **Dry grasslands** representing one of the most abundant natural habitats but which, sadly, are becoming increasingly rare due to an encroaching overgrowth.

A singular characteristic of the Branica Valley also worth preserving are the meadow **orchards** that provide a favourable natural habitat to rare species of bird, such as the hoopoe and the little owl.

STREAMS, PONDS...

What types of water bodies are found in the Branica Valley Area?

The Branica Valley has numerous **brooks** and **streams** which drain into the torrential **Raša** and **Branica** rivers. The preservation of endangered species depends not only on perennial brooks and streams but on smaller springs and ponds as well.

As the streams descend from the Vipava Hills to the Branica Valley below, their currents gradually slow down. The calmer sections of the waterway offer refuge to the larvae of a variety of amphibians, dragon flies and other riparian fauna.

Larger **ponds** can be found on the Karst near Goče, whilst the Branica Valley has numerous large pools and wetlands that provide a home to toads and other species that prefer **small stagnant waters**.



Italian Agile Frog

Where does it live?

The Italian Agile Frog (*Rana latastei*) lives in **humid, leafy forests** with a robust undergrowth where ground water levels are high. Its eggs (spawn) are laid between mid-February and mid-April in **slow-moving lowland streams and in the bends of larger rivers**. The females attach their spawn onto submerged branches or roots.

What threatens it?

It is threatened mainly by:

- filling and drainage of wetlands, the regulation of waterways, primarily for protection against flooding,
- deforestation of lowland floodplain forests and their conversion to farmland, the clearing of forests and trees adjacent to brooks and streams,
- water pollution.

Did you know?

- The Italian Agile frog is **one of the rarest species of frog** in Europe. It is only found in the broader lowlands of the Po river. The Branica and Vipava valleys represent the eastern extent of its range.
- The males **make their calls under water** and can only be heard if they are in very shallow water.



Yellow-Bellied Toad

Where does it live?

This **forest species** spends most of its time between mating periods in humid places beneath stones, in cracks in rocks and in holes. Mating occurs several times between April and August in unshaded **impermanent ponds** in forests or nearby, as well as in other **smaller stagnant waters**. The females lay their eggs (spawn) on submerged plants or grassy stalks hanging over the water.

What threatens it?

The Yellow-bellied (*Bombina variegata*) toad is quite a common species in Slovenia, however, it is threatened by:

- filling and drainage of wetlands, destructions of ponds, regulation of waterways for protection against flooding,
- population of stagnant waters (such as ponds) by fish and invasive species,
- water pollution.

Did you know?



- The tadpoles take 40 to 70 days to evolve, depending on the water temperature.
- Toads within a given area do not mate at the same time and they would lose their entire brood if the ponds were to dry up too quickly.



Italian Barbel

Where does it live?

The Italian Barbel (*Barbus plebejus*) lives in **swiftly flowing waters** of the Adriatic catchment area. Older barbels are solitary fish whilst younger fish live in schools close to embankments. They spawn in May and June on gravelly and sandy ground. In the Branica Valley, barbels are only found in the lower course of the Branica river, where they have their spawning grounds.

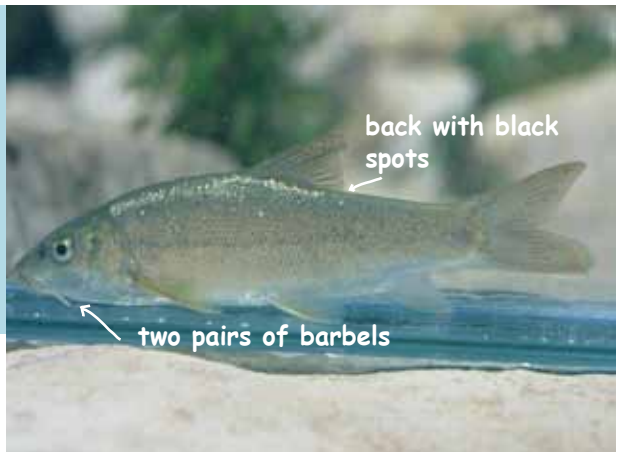
What threatens it?

The barbel is common in Slovenia, however, it is threatened by:

- anti-flooding regulation of waterways which destroys its gravelly and sandy spawning grounds,
- the construction of dams which prevent its migration along waterways,
- water pollution.

Did you know?

- A single female can lay between 6,000 and 7,000 eggs, which it attaches to submerged stones.
- A very similar species of barbel lives in the catchment area of the Danube river.



The Lombardy Lamprey

Where does it live ?

Lombardy Lampreys (*Letheuteron zanandreai*) inhabit **silty or sandy shallows of rivers and streams**. They are most commonly found along embankments. Lampreys spawn between February and May in clean waters with sandy or gravelly beds. The female lays her eggs in a nest which was dug out by the male. The larvae may live in the silty river bed for up to 5 years before transforming into adult lamprey.

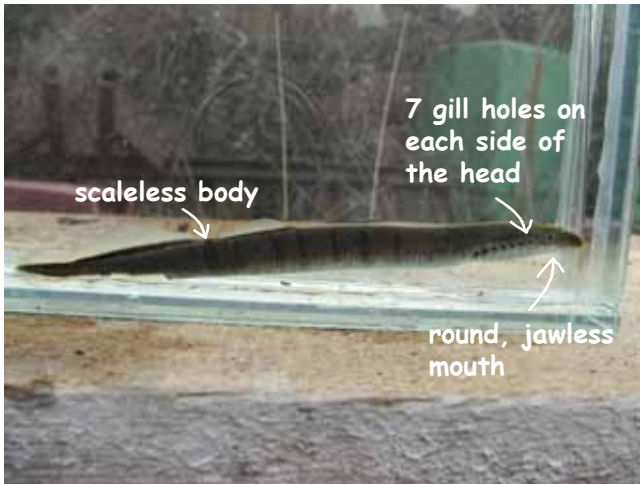
What threatens it?

The Lombardy lamprey is threatened primarily by:

- regulation of waterways and alteration of riverbeds, which destroys the gravelly and sandy environment crucial to their spawning and larval development,
- the construction of dams which prevent upstream migration to their spawning grounds,
- water pollution.

Did you know?

- Adult lampreys do not feed because their intestinal tract degenerates during metamorphosis. Consequently, adult lampreys live for only 6 – 10 months.



Ground Beetle

Where does it live?

Ground beetles (*Carabus variolosus*) are found on **headwater areas and swamps in woodlands**. They are most easily seen between April and June, when they mate, or in late summer when the young complete their transformation. The larvae and adult beetles are well adapted to water, where they also seek their prey. Young beetles winter in decaying wood or buried in the soft soil at the river bank.

What threatens it?

This species is typically found in natural forest brooks and streams and is threatened by:

- alteration of the banks and beds of forest brooks and streams,
- cropping of trees adjacent to brooks and streams and deforestation,
- pollution of brooks and streams.

Did you know?

- The ground beetle has a degenerated second pair of wings and therefore cannot fly.



The Balkan Goldenring

Where does it live?

The Balkan Goldenring (*Cordulegaster heros*) lives only along **natural forest brooks and streams with sandy or slightly silty beds**. Adult Balkan Goldenring dragonflies can be observed between June and late August as they dart up and down the streams, hunting and mating. The female lays her eggs in the moist sand at the edge of a stream. Larvae take several years to mature, during which time they are more-or-less buried in the sand of the stream bed. Both adult dragonflies and their larvae are predators. When larvae develop into adults, they climb out of the water onto the bank, where they undergo one final transformation.

What threatens it?

The Balkan Goldenring had become endangered primarily because of:

- alteration of stream beds, denying them of the sandy/silty bottom that is crucial to the development of the larvae,
- deforestation of brookside forests and their conversion into vineyards and pastureland,
- water pollution.

Did you know?

- The Balkan Goldenring is the largest dragonfly in Europe.
- Even though the brooks and streams along which it lives may dry out in mid-Summer, the larvae survive because they buried deep beneath the sand and silt at the bottom of the stream.



WOODLANDS

What types of forests are found in the Branica Valley Area?

The forests of the Branica Valley Area are very diverse. Hilly slopes are covered by **oak forests**, which are often accompanied by false acacias. The dryer areas are populated mainly by the **hop hornbeam**, whilst **black alders** and various willows are to be found along waterways as they require moister soils.

Cultivated black pine is quite common, however, it is gradually giving way to native warmth-loving deciduous species, such as the sessile and Turkey oak, common and hop hornbeam and the **flowering ash**.

There are many tree species found here, including the sweet chestnut, common walnut, common ash, field elm, lime tree, cherry, common maple, checker tree, true service tree and whitebeam.



Stag Beetle

Where does it live?

The Stag beetle (*Lucanus cervus*) prefers **oak forests** but its larvae feed on the decaying wood of other tree species as well. The Stag beetle develops from egg to adult in decaying wood found on the ground in approximately 4 years. The better the food available to the larvae, the larger the adult beetle will be. Adult beetles are seen mostly at dusk between June and August.

What threatens it?

The Stag beetle is a common species in Slovenia but is threatened here and there by:

- poor forest management (logging trees just above ground, excessive clearing of dead wood from forests),
- deforestation,
- pollution (expansion of industrial zones, overuse of poisons in agriculture).

Did you know?

- Adult Stag beetles feed on plant secretions. The males do not use their large jaws for feeding but for ritual fights to win females.



The jaws of males have evolved into horn-like protrusions



Beech Cerambycid Beetle

Where does it live?

The Beech Cerambycid beetle (*Morimus funereus*) is a typical **forest species**. Larvae and adults feed on the wood of various tree species. Adult beetles are attracted by the scent of cut trees, primarily oak, beech and firs, where the females lay their eggs. Larvae evolve for several years whilst adults live only for two years. Beech Cerambycid beetles can most commonly be observed between May and July on piles of logs.

What threatens it?

The Beech Cerambycid beetle (*Morimus funereus*) is a common species in Slovenia but may be threatened by:

- poor forest management (logging trees just above ground, excessive clearing of dead wood from forests) and deforestation,
- leaving logs and wood in the forest over summer. Females lay their eggs in this wood, which is eventually used as firewood or processed.

Did you know?

- The Beech Cerambycid beetle does not have a second pair of wings and therefore cannot fly. Roads and waterways are an impassable barrier for it.



Great Capricorn Beetle

Where does it live?

The Great Capricorn beetle (*Cerambyx cerdo*) lives in **assorted oak species**, mainly old trees on **sunny forest edges and parks**. Invaded oaks can be recognised by a dry and defoliated branch, and 1-3 cm wide oval holes on the trunk and dry branches. Females lay their eggs in the creased bark and cracks on oak trees. The larvae feed on the wood for 3 to 4 years whilst adults live only for a few weeks. They are most active at dusk, when they crawl out of their hollows but males can be seen during the day as well, crawling up and down tree trunks.

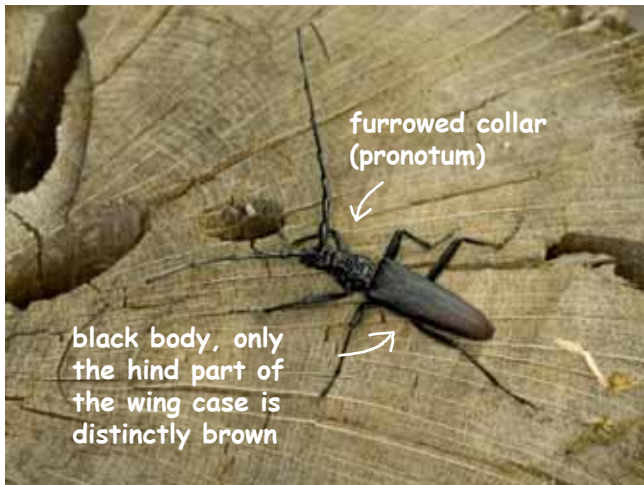
What threatens it?

This species was once commonly found but has today become very rare because of:

- deforestation of oak forests,
- logging of invaded trees as foresters considered the beetles as pests.

Did you know?

- Trees that have been invaded by this beetle have a characteristic look which attracts other beetles of the same species to mate and lay their eggs.



Jersey Tiger Moth

Where does it live?

The Jersey tiger (*Callimorpha quadripunctaria*) moth inhabits **shady, humid and cooler parts of forests from the lowlands to the tree line**. It is also commonly found in scrubs, stone quarries, bush-covered rocky outcrops with abundant feeding plants from which the adult moths collect nectar (thistles and other feeding plants that flower in late summer in the forest and at its edge) in the daytime. Adult moths can be observed between July and August. The young caterpillars feed on the leaves of dead nettles and other undergrowth herbs, and after wintering they feed on common hazel, blackberry and other leaves. Metamorphosis takes place in early summer and adults emerge in July and August.

What threatens it?

This species is not endangered in Slovenia but it could be endangered by a scarcity of feeding / nectar-bearing plants because of:

- regular cropping of the forest edge,
- overgrowth of open spaces.

Did you know?

- While resting, the Jersey tiger moth lays its wings flat alongside its body, which is characteristic moth behaviour.
- It feeds during the day and mates during the night, when it is often attracted by lamps.



Geoffroy's Bat

Where does it live?

Geoffroy's bat (*Myotis emarginatus*) is attracted to **deciduous and mixed forests adjacent to water bodies** but also lives in parks. It feeds mainly on spiders, as well as caterpillars and other insects which it finds on leaves, branches and on the ground. In the summer, females converge in large swarms (maternity colonies) in **warm attics and belfries**. It spends its winters in caves or abandoned trenches, where it prefers solitude and is therefore difficult to observe.

What threatens it?

It is threatened mainly by:

- blocking access to its shelters (attics and caves) and disturbance in its shelters (attic renovations, visitors to caves),
- lighting of shelters,
- use of pesticides and logging of forests near its shelters.

Did you know?

- We know very little about Geoffroy's bat as we have been studying it for only 20 years.
- One of the largest maternity colonies in Slovenia is in the Rihemberk Castle.



GRASSLANDS

What types of grassland are found in the Branica Valley Area?

The grasslands in the Branica Valley Area were created in the distant past when humans cut down the forests. They were maintained by regular cropping and grazing.

Grasslands differ greatly in terms of turf, accessibility of water and farming techniques. Some plant species prefer moist meadows along the Branica river, whilst others prefer the dry meadows of the Karst.

Native orchids, however, thrive only in meadows that are not fertilised. The Natura 2000 site in the Branica Valley protects **dry and rocky grasslands and juniper stands**. Such an environment, however, is characteristic for the entire Karst, not only the Branica Valley.



Greater Horseshoe Bat

Where dose it live?

The greater horseshoe bat (*Rhinolophus ferrumequinum*) prefers warm, south-facing slopes and valleys with stagnant or running water. It seeks out its food in a landscape characterised by a **mosaic of deciduous forests and active meadows**. Its main food are beetles that live off livestock droppings but it also hunts moths and some other species of large insects. Greater horseshoe bats spend their winters in **caves**, where they hang from the ceilings like dry pears. Females spend summers in maternity colonies, most commonly found in **attics and belfries** that are warmed by the sun, and more rarely in caves.

What threatens it?

It is threatened mainly by:

- blocking access to its shelters (attics and caves) and disturbance in its shelters (attic renovations, visitors to caves),
- use of pesticides, abandonment of grazing and spontaneous afforestation.

Did you know?

- The oldest recorded age for a greater horseshoe bat is 30 years.
- It visits the same shelters year after year. In one case, a female spent its winters in the same shelter for 19 years in a row.



Dry Grasslands

Where are they?

These are dry or semi-arid grasslands located on **warm slopes and windward ridges**. Grasses grow but do not thrive and such meadows are mown only once a year or left to grazing. A small pasture may be home to more than 80 species of plants, making these some of the most diverse grasslands in Europe.

What threatens them?

- abandonment of grazing and mowing (they become overgrown by forest), reforestation, intensive fertilisation, intensive grazing,
- building construction, vehicles, conversion of areas for sporting purposes...



Common Juniper Formations

Where are they?

When mowing and grazing cease, pastures become overgrown. Common junipers are an **intermediate phase in the process of overgrowing dry karstic grasslands**. If no more mowing or grazing takes place on such grasslands, trees eventually take root and the grasslands will eventually revert to forest.

What threatens them?

Because of the encroachment of open grasslands, juniper formations are currently spreading, however, they may be threatened by:

- abandonment of grazing and mowing (encroached by forest), reforestation
- removal of juniper formations, building construction, conversion of areas for sporting purposes...



BIODIVERSITY

Goals of the Natura 2000 Network

The primary objective we wish to achieve within the Natura 2000 Network is to **safeguard the diversity of the living world** (biodiversity) in Europe. Biodiversity provides us with numerous material goods and services even though we are not aware of most of them until they are lost:

- provides food, fuel, oxygen, shelter and building materials,
- cleans the air and water, detoxifies and breaks down wastes,
- alleviates floods, droughts, temperature extremes and strong winds,
- creates fertile soils and replenishes them,
- pollinates plants - including cultured plants, such as fruit trees, vegetables, etc,
- reduces the risk of plant, animal and agricultural crop diseases,
- preserves genetic resources which are crucial to the development of new strains, medicines and other products,
- provides cultural and aesthetic benefits,
- enhances the ability to adapt to changes.

Safeguarding biodiversity safeguards life.

How do we safeguard biodiversity?

We may contribute to safeguarding of biodiversity by **preserving natural living environments** (habitats) and **free-living animal and plant species**. Using a variety of measures, we try to ensure the following:

- that areas hosting genetic diversity and habitat types do not shrink in future,
- that free-living animal and plant species have a sufficiently large living space and other favourable conditions to be able to survive independently in the long term.



Sources:

- Bertok M., Budihna N., Povž M., 2003. STROKOVNE OSNOVE ZA VZPOSTAVLJANJE OMREŽJA NATURA 2000 RIBE (PISCES), PIŠKURJI (CYCLOSTOMATA), RAKI DESETERONOŽCI (DECAPODA) (končno poročilo). Naročnik: MOPE, ARSO, Ljubljana. Zavod za ribištvo Slovenije, Župančičeva 9, SI-1000 Ljubljana.
- Pobiljšaj, K. & A. Lešnik, 2003. Strokovna izhodišča za vzpostavljanje omrežja Natura 2000: Dvoživke (Amphibia) (končno poročilo). Naročnik: MOPE, ARSO, Ljubljana. Center za kartografijo favne in flore, Miklavž na Dravskem polju.
- Drovenik B. in A. Pirnat, 2003. Strokovna izhodišča za vzpostavljanje omrežja NATURA 2000: Hrošči (Coleoptera) (končno poročilo). Naročnik: MOPE, ARSO, Ljubljana. Biološki inštitut Jovana Hadžija ZRC SAZU, Ljubljana.
- Kotarac, M., A. Šalamun & S. Weldt, 2003. Strokovna izhodišča za vzpostavljanje omrežja Natura 2000: Kačji pastirji (Odonata) (končno poročilo). Naročnik: MOPE, ARSO, Ljubljana. Center za kartografijo favne in flore, Miklavž na Dravskem polju. 104 str., digitalne priloge.
- Čelik T. (ur.), 2003. Strokovna izhodišča za vzpostavljanje omrežja NATURA 2000. Metulji (Lepidoptera). Predhodno poročilo. Naročnik: MOPE, ARSO, Ljubljana. Znanstvenoraziskovalni center SAZU, Biološki inštitut Jovana Hadžija, Ljubljana.
- Kryštufek, B., P. Presetnik & A. Šalamun, 2003. Strokovne osnove za vzpostavljanje omrežja Natura 2000: Netopirji (Chiroptera) (končno poročilo). Naročnik: Ministrstvo za okolje, prostor in energijo, ARSO, Ljubljana. Prirodoslovni muzej Slovenije, Ljubljana. 322 str., digitalne priloge.
- Natura 2000 območja v Sloveniji - Dolina Branice. Dostopno na http://www.natura2000.gov.si/index.php?id=105&no_cache=1&area_id=206 (20.5.2012)
- Biotska raznovrstnost je življenje; naše življenje. Dostopno na <http://www.biotskaraznovrstnost.si/> (15. 6. 2012)

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IN KOMENSKEGA KRAJA

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