

# Let's explore **Bodrogzug!**



## **Dear Visitors!**

Welcome to Bodrogzug, one of the most beautiful water tour areas in Hungary! It is a romantic natural area bordered by the rivers Tisza and Bodrog, unique in Hungary and even in Europe. In spring, the area may be fully inundated, the floods transform the area into a lake. In 1989, it was added to the List of Wetlands of International Importance (the Ramsar List), as a significant habitat of wetland birds. In the migration period, more than 20,000 birds appear here, while the floodplains, inaccessible from the time of spring floods until mid-summer provide undisturbed breeding possibilities for the local, especially abundant wetland avian fauna. This tour brochure may be useful to all, who wish to roam the Bodrogzug area on foot, by bike, on horseback or by boat. It helps visitors to find their way among the wetland habitats and it is also useful to identify the most important plant and animal species of the area.



## **Important!**

- Water tours in the territory are subject to permission!
- For further information visit [bodrogzug.hu](http://bodrogzug.hu)



 **Aggtelek National Park Administration,  
Zemplén Regional Office**  
 Hungary,  
3916 Bodrogkeresztúr, Óvásártér u. 14.

 [info.anp@t-online.hu](mailto:info.anp@t-online.hu)

 [www.anp.hu](http://www.anp.hu)

[anp.nemzetipark.gov.hu](http://anp.nemzetipark.gov.hu)

 [AggtelekiNemzetiParkIgazgatóság](https://www.facebook.com/AggtelekiNemzetiParkIgazgatóság)



# The floral garden of Bodrogzug

At first sight, the area of Bodrogzug seems to be a flatland; however, its diversity lies in the multitude of habitats. Water, shaping the face of this land for ages, created a microrelief providing ideal conditions for various plant communities.

## Forests

Hills protruding from the floodplains used to be populated by **common oak** forests. Most of these have been cut out and most often cultivated as arable land, while a larger fragment may be seen at the Long Forest near Sátoraljaújhely. In spring, one may see a carpet of *lily of the valley* in the undergrowth.



Hornbeam - oak forest



Lily of the valley

Only a few solitary common oaks, standing on the meadows remind us of the forests of the past. At certain places, lines of these trees appear along the river. In addition to the *common oak*, the forests consist of a subspecies of the *narrow leaved ash* – *Fraxinus angustifolia subsp. pannonica* – and of the *European wide elm*.

At the low floodplains of the rivers, where floods are regular, one may find **alluvial forests of willows and cottonwoods**. Remains of these forests are visible along the river Bodrog; occasionally, only as very thin lines of trees. They consist of *crack willow*, *white willow* and – mostly – *grey poplar* and *black poplar*, with the protected summer snowflake in the spring undergrowth.

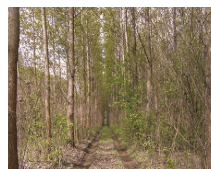


Alluvial forests of willows and cottonwoods



Summer snowflake

In addition to the alluvial forests in near-natural state, one may often find **plantations of bred poplars and willows**. The undergrowth of these is very poor in species, mostly consisting of *European dewberry* and *nettle*.



A plantation of bred poplars



European dewberry

## Wet grasslands

Large **wet grasslands** appeared after clearing the forests from the floodplains. The main grass species living here is the *meadow foxtail*, the hay of which is an exceptional winter forage. Frequently seen flowers of the area are the *Ragged-Robin*, the *northern bedstraw*, the *bird's-foot trefoil* and the *meadow buttercup*. These areas are also rich in protected species: *Cnidium dubium*, *garden speedwell*, *Siberian iris* and *marsh gentian* may be sighted here.

At the wetter and deeper parts, larger dicotyledons are dominant, not foxtail. These plant associations are the **swamp high shrubs**. In spring, the yellow iris is the first to open its yellow flowers. In summer, one may observe the purple flowers of the *purple loosestrife* and the *marsh woundwort*, the yellow of the *shining spurge*, the blue of the *garden speedwell*, and in autumn, one may see the white of the chamomile-like *autumn ox-eye*. The latter two species are protected, do not collect them!



Siberian iris



Meadow buttercup



Marsh gentian



Cnidium dubium



Ragged-Robin

## Cattail beds, marshes

The parts of the floodplains, where water remains until mid-summer, are populated with vast amounts of **sweet-grass and reed canary grass**.

On the edges of the deeper depressions and oxbow lakes, there are marsh populations of **sedges, bur-reed, flowering rush and common water-plantain**, which will survive also temporary droughts. Beds of **cattail and lakeshore bulrush** are covered with water all year long.



Garden speedwell



Swamp high shrubs

## Submergent vegetation

In the deepest parts of the waters, various submergent plant associations have developed. These are populations of **yellow waterlily, water lily, water chestnut, floating fern**, as well as the **water soldier and greater bladderwort** populations of lakes and marshes. A scarce and protected beauty of the waters is the *fringed water lily*.



Sweet-grass territory



Marsh woundwort

## Invasive species of the floodplains

Unfortunately, most parts of the floodplains are invaded by invasive species. These include the aggressive **green ash, the boxelder maple and the riverbank grape**.

At the marshes, the most problematic invasive species is the **false indigo bush**. If people stop using the grasslands as hay meadows and pastures, the false indigo bush will recklessly invade these habitats.



Flowering rush



Cattail bed



Water soldier vegetation



Water soldier



Autumn ox-eye



Yellow iris



Floating fern

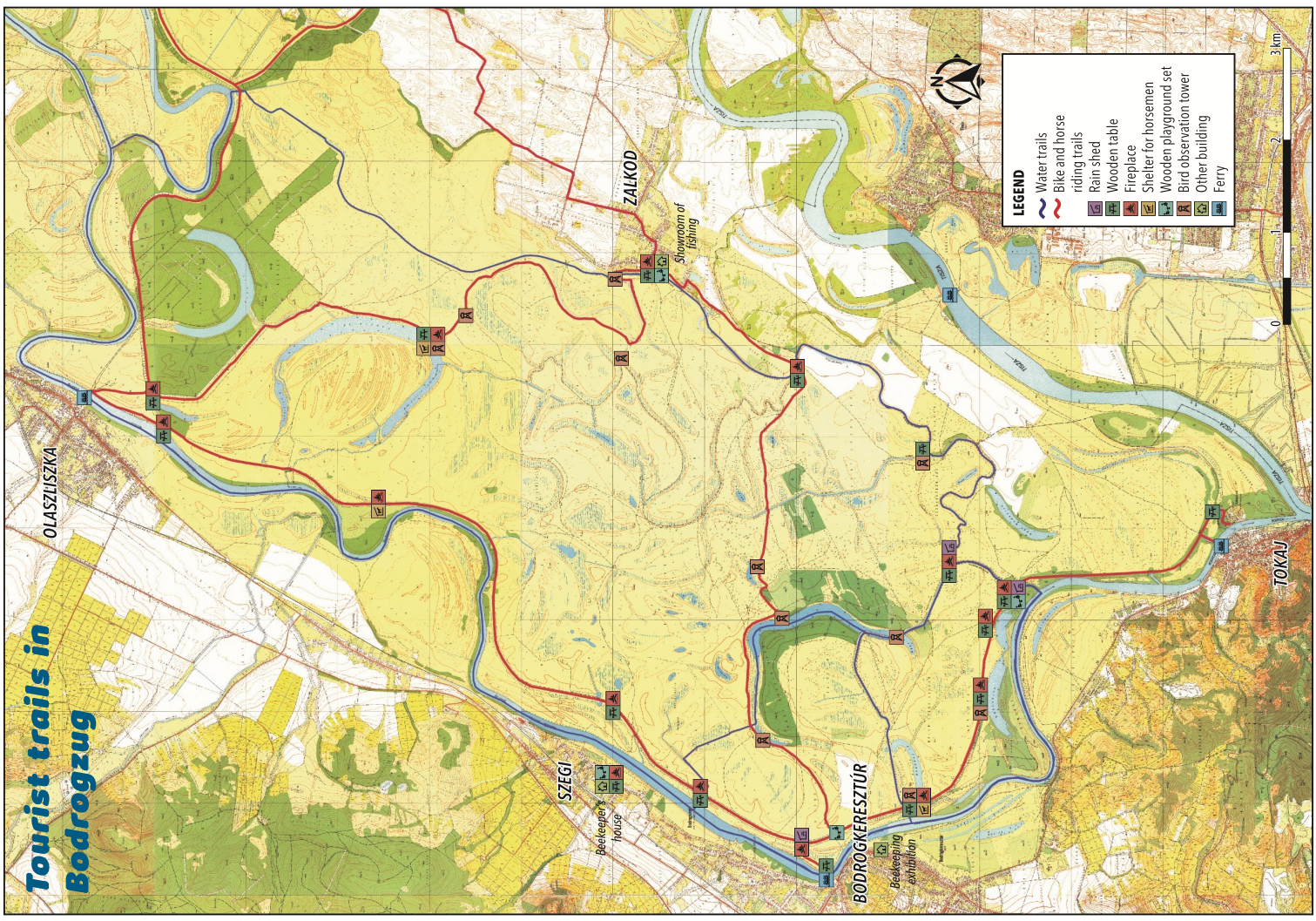


European white water lily



Greater bladderwort

# Tourist trails in Bodrogzug



**LEGEND**

- Water trails
- Bike and horse riding trails
- Rain shed
- Wooden table
- Fireplace
- Shelter for horsemen
- Wooden playground set
- Bird observation tower
- Other building
- Ferry



# Bodrogzug fauna

In Bodrogzug, wildlife is influenced mostly by the floods – appearing at the territory even multiple times a year. Often, the whole area may be flooded with water, even for weeks.



Prussian carp



European mudminnow

## Fish

This territory is rich in fish. The species living at the slower, muddier waters of the Bodrog (such as the *pike*, the *common roach* and the *Balon's ruffe*) are different from those living at the faster waters of the Tisza, having a sandier bottom (such as the *sterlet*, the *Danube streber* or the *common barbel*). The burbot and the asp are present in both waters. In the waters of the territory containing less oxygen and more organic material, other species may be observed (such as the European weatherfish). The marshes provide a habitat for the *European mudminnow*, a species developed in the Danube and its tributaries and in the Carpathian basin. In the 1990s, the largest population of this species in Hungary was the one living in the territory of Bodrogzug. By now, a strong competitor imported with fish from the far east, the *Chinese sleeper*, has almost totally eradicated it.



European weatherfish



Pike

Unlike the vegetation, the Bodrogzug fauna is not clearly associated with a certain habitat type, since most species use rivers, lakes, wetlands and dry habitats equally during their lives. One may even observe species coming to the waters of Bodrogzug from the Zemplén mountain range or Nagy Kopasz hill near Tokaj.

## Tisza mayflies

On the two rivers surrounding the territory, one may experience a wonderful and unique natural phenomenon, with a difference of approximately two weeks. First, it is on the Bodrog that one may see the short, a few-hours-long "adult" life of the largest mayfly in Europe, the *Tisza mayfly*, usually during the first week of June. After living as larvae in the riverbed for three years, mayflies come up to the surface in the evening to die by the next day; later, wetland wildlife remembers them only as a source of forage.

## Amphibians, reptiles

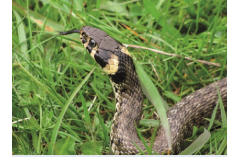
On mild spring evenings, the "noise" from the waters and ponds, caused mainly by frogs and toads, is audible even in the surrounding villages. These waters contain masses of *European fire-bellied toads*, which spend almost all their lives in shallow still water.

When scared, the species suddenly arches its body to show the bright spots located on its neck and on the inner side of its limbs to the attacker. This is the unkenreflex, which the toad uses to fend off an imminent attack by a predator.

Of the true frogs, the moor frog is often sighted at the territory – in their breeding period, this species (the males) wears beautiful blue colours. In oxbow lakes and on the banks of lakes and rivers, one may often see three Hungarian frog species: the *marsh frog*, the *pool frog* and



Moor frog



Grass snake



European tree frog

the *edible frog*. It is quite difficult to distinguish them. The edible frog is a hybrid, the result of the natural outcrossing of the marsh frog and the pool frog; however, it was considered to be a separate species for long.

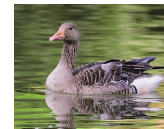
As far as reptiles are concerned, during the tours in the area, one may meet the most frequent Hungarian reptile species, the *water snake* and also the *dice snake*, which always stays close to the water. The previous species, contrary to its name, is not as tightly connected to water as the dice snake. Both aforementioned snake species are completely harmless. The grass snake tries to scare off its smaller attackers using the "cobra pose", i.e. it tries to fend off the attacker by raising its head and the front part of its body, hissing. However, another manoeuvre is more common: as a defence, it spreads a very bad smelling secretion from its cloaca. Therefore, it is more fortunate to admire the species from a distance, rather than taking it into one's hands. In addition to this, all amphibian and reptile species are protected in Hungary.

## Birds

When on a trip in Bodrogzug, birds are the animals living in the territory that one may observe the most frequently. In spring, when the area turns into a single vast lake,



European fire-bellied toad



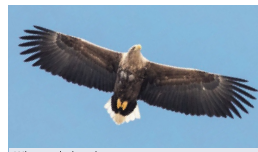
Greylag goose



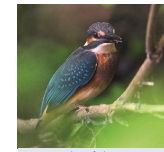
Whiskered tern



Black stork



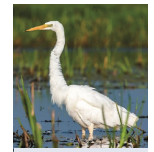
White-tailed eagle



Common kingfisher



Eurasian spoonbill



Great egret

numerous geese, ducks, seagulls (*greylag goose*, *mallard*, *black-headed gull*) appear here. In the ponds and at the muddy areas emerging after the water flows away, hundreds of birds inhabiting the banks (*common snipe*, *ruff*, *common redshank*) appear here. In summer, egrets and herons breeding in the territory of Taktaköz come to forage to floodplains in great numbers.

The snow-white *great egret* is the heralding bird of Hungarian nature conservancy. Currently, its Hungarian population amounts to thousands; however, in the 1920s, there were only a mere 25 to 30 couples in the country. This was when the first egret guard was appointed on lake Kis-Balaton (Little Balaton), with the task to protect and survey the egrets, thus becoming the first park ranger in Hungary.

The *grey heron* is the most frequently breeding heron species in Hungary, therefore it is often seen also in this territory. It is easily recognisable by its greyish feathers, slow flight and having its neck retracted into an S-shape during flight, a typical feature of herons. The Eurasian bittern may be easier heard than seen – its voice is audible from the reedbeds along the path, at times, it may be even kilometres away. One of the previous Hungarian names of the species – *dobosgém* ("drum heron") – referred to the fact that its inflated alimentary canal acted as an amplifier.



Purple heron



Grey heron



Eurasian bittern

Looking up to the skies, one may observe not only wetland birds, but also birds of prey. The *common buzzard* is not a wetland bird, but as the largest of birds of prey in Hungary, it appears also here. A lot less frequent is the largest raptor species in Hungary, the *white-tailed eagle*. Its wingspan is approx. 240 cm. It may start refurbishing its enormous nest as early as December; often, it already breeds in mid-February.

On water tours, one may often observe also juveniles of the species, already able to fly. Another frequently observed bird of prey is the *western marsh harrier*, breeding in the reedbeds.

## Mammals

Of the predators with pelts, the most frequent is the *otter* - with a little luck, one may even see it. This species catches fish very efficiently also due to the hydrodynamic shape of its body and webbed feet. Otters are capable of swimming even 150 to 200 m underwater with a single breath of air and are capable of achieving a speed of 12 km/h at short distances. The most frequently observed inland

predator is the *red fox*; however, occasionally, one may see even *golden jackals*.

During the last decade, the largest European rodent has spread along the waters of Hungary, so it is present also in the territory of Bodrogzug. The animal itself is rarely visible; however, on water tours, one may often see its work, including chewed branches, fallen trees and even dams. This animal is the *Eurasian beaver*. The most characteristic feature of the species is its flat, scaly tail that it uses as a steering aid when swimming.

Naturally, in addition to the few aforementioned species, one may observe a multitude of others - this is a proof of the diversity and the importance of the wetland habitats of Bodrogzug.



Black kite



Western marsh harrier (male)



Eurasian otter



Eurasian beaver