

# How to overcome communication barriers in nature experience

## Annex 3: Audio Guide

Wollmatinger Reed, Konstanz, Germany  
Script for the nature trail

### Notes on accessibility

	<b>“GOTTLIEBER TRAIL”</b>	<b>“REICHENAUER DAM”</b>
<b>DIRECTIONS:</b>	Accessibility by public transport very good (< 1 km from the train station Wollmatingen) and < 100 meters from the bus stop Fritz-Arnold-Straße (bus line 6), Limited parking on site.	Starting point directly at the Kindlebildkapellen parking lot. Accessibility by public transport very good; starting point 500 meters from the train station Reichenau (note: need to cross a rather steep bridge). At the end of the trail there is the bus stop Oberzell Bruckgraben (bus line 204).
<b>LENGTH</b>	Total distance 2.6 km (1.3 to the Rhine).	Total distance 4.2 km (however, both start and destination points are connected by public transport) therefore <i>one way</i> possible (2.1 km).
<b>TRAIL CHARACTERISTICS</b>	Exclusively straight gravel path. Low dangers of derailing due to the trail being wide throughout. Towards the end of the trail, there is some frost damage, but you can walk around it. The trail is only used by pedestrians, therefore a visit in groups is possible.	Paved road The path is also the bike path, which is very heavily used, so it is not advisable to visit in groups. Visually impaired people should only come with an accompanying person.
<b>RESTING OPTIONS</b>	There is a bench at the finish point after 1.3 km.	3 benches (approx. every 700 m).

<b>SUITABLE FOR:</b>	Visually impaired; hearing impaired; families with small children/strollers, larger groups, people with reduced mobility.	Visually impaired (with accompanying person), hearing impaired, wheelchair users (but not in large groups); people with reduced mobility.
<b>INFORMATION BOARDS</b>	The information boards are often difficult to access because of the surrounding vegetation (cf. Fig. 1).	The information boards are placed in small, easily accessible bays next to the cycle path.
<b>POTENTIALS AND DEVELOPMENT OPPORTUNITIES</b>	Establishing more seating options and making information signs more accessible to accommodate people with limited mobility such as the elderly.	Retrofit in trail markings to separate pedestrian path from bicycle path.

## Text Audio Guide:

### Gottlieb way:

#### Introduction

Welcome to the nature reserve Wollmatinger Reed. The reed extends over 774 ha. 770 ha correspond to 1000 football fields - a considerable size, which makes the Wollmatinger Reed the largest nature reserve around Lake Constance.

The word reed describes a biotope in the riparian area of water bodies, characterised by seasonal flooding and the associated special plant communities. Along the way, we will get to know some species in more detail.

The German Nature and Biodiversity Conservation Union (NABU) and the Nature Conservation Administration of Baden-Württemberg are jointly responsible for the preservation, maintenance of the reed and the provision of information.

Our little journey leads straight spacious meadows, marsh forests and ends at the Rhine River. There you can have a seat, listen to the ripple of the river or enjoy a beautiful view of the Swiss village Gottlieben on the other lake's bank.

#### Section 1:

The first section of the trail is still in the border area between the adjacent industrial area and the nature reserve. The driving cars are still clearly audible, but lines of tall slender poplars already characterized the left side of the trail. On the right side, we see the overflow channel of the sewage treatment plant.

The canal, which was built in 1960 and is about 5 meters wide, dissects the area, which has been for a long time an insurmountable obstacle for many animals. Therefore, 30 years after the construction of the canal, i.e. in the 1990s, seven wildlife crossings were built over the canal, which reconnect the area and the separated populations. These so-called green bridges do not arch like a typical bridge but are flat and thus nicely blend into the environment.

## Section 2:

After about 300 m, the initial picture changes. The dense poplars give way to a wide open space. This change is noticeable by more than our eyes. We can feel rising temperatures in direct sunlight; in spring we can clearly hear the swelling sounds of birds whereas in Summer many field crickets take the scene. Field crickets are beetle-like animals that live in the ground and attract attention by chirping loudly. These insects are 2-3 cm in size, usually brown or black, and have strong, long hind legs that allow the crickets to jump.

On the right, the first green bridge can now be seen, which connects both reed sections. With a little luck, the migration of the young lapwings can be observed in spring. The lapwing is about the size of a pigeon, which means around 30 cm. Its plumage is unmistakable because of the contrast between its black upper side with a greenish shimmering metallic sheen and its white underside with a black breast band. Its beak is dark, narrow and tapering. Its call sounds like "kiju-wiit" [insert audio of the call here]. Lapwings breed in wet reed meadows. Yet, these sites are too wet for rearing their offspring, which is why the bird family migrates on to higher-lying forage meadows.

## Section 3:

As we go ahead, there are spacious meadows on the right and spacious meadows on the left. You may feel a distinct breeze and hear sounds in the distance. At first glance, you cannot tell a difference between the meadows, but the one to your right i.e. west of the canal is very wet and low in nutrients. Lake Constance is the only body of water in Germany whose water level still has a natural dynamic. Due to the melting of the snow in the nearby Alps, the water level rises up to several meters in spring and swamps the meadow until autumn. Wet meadows are only mowed once a year - in late Autumn/Winter, when the stalks are dry and hollow. Here you can find very rare plants such as the bright pink **marsh gladiolus**, the deep blue **marsh gentian**, with its bell-shaped flowers or the violet **bird's-eye primrose**. On the left, i.e. east of the canal is the so-called forage meadow. It is on a higher altitude and therefore drier and more nutritious. Like many meadows, it is mowed twice a year, in Spring and Autumn.

## Section 4:

Accompanied by birdsong, we stroll along the trail. Herons, statue-like, are to be seen sporadically. Flowers line the edge of the path. Depending on the season, you will easily detect the delicate cuckoo flower, the bright yellow creeping buttercup or the upright blue-violet chicory.

Accompanied by the variety of sounds and smells, we let the reed tell us its long history.

Lake Constance formed 10,000 years ago. In the Stone Age, people hunted reindeer in this area. Later on, pile farmers cut gaps in the floodplain forest and built their villages well protected on piles in the lake. In the Middle Age, farmers let cattle graze here and mowed the reeds; during this time period, the reeds belonged to the whole village as a common land.

Prior to the industrialization, the reed stalks were used as building material. Today, conservationists preserve this cultural landscape. They mow so that the wet meadows do not turn into forest.

## Section 5:

On rainy days, it is better to wear waterproofed boots and in winter you should bring a warm jacket as icy winds sweep across the open countryside. At any time of year it is easy to see the information boards that pop up to the left and right of the trail, with some indicating that leaving the trail is prohibited. There is a good reason for this restriction: the reed is home to 290 species of birds, various mammals, amphibians and insects - and these do not want to be disturbed by us or by off-leash dogs.

Water sports are also prohibited in the adjacent shore area of the reed, so that water birds can breed and moult undisturbed.

“Moult” is the term used to describe the change of plumage of birds. This is because the feathers need to be renewed at regular intervals. The feathers are usually replaced gradually. However, a number of species are unable to fly during the moult, as the plumage is completely shed within a very short time (often during only a few days) and then grows back from the scratch.

#### Section 5

After another 400 meters, a pond can be glimpsed on the right-hand side. This shallow body of water was created to provide a habitat for even more animal and plant species. Some bird species, such as lapwings or curlews, pick insect larvae out of the mud. However, when these birds are migrating at high tide, even their long beaks are not long enough. The newly created shallow pond has therefore created an additional feeding area.

#### Section 6:

An extraordinary animal that has been actively shaping its own habitat here since 2005 must not be forgotten - the beaver. If there are not enough herbs, water plants, leaves and fruits for the strict vegetarian to eat, the beaver dams up water, cuts down trees or promotes woody plants that tolerate wet feet. In this way, the beaver secures its own harvest as a gardener. Beavers grow up to one meter in length, making them larger and heavier than badgers, for example. As beavers are nocturnal and rather shy, they are rarely seen. However, they leave traces such as hourglass-shaped gnawed trees, peeled branches and path systems with slides and entrances on the banks. In the Wollmatinger Reed, it is worth keeping your eyes open, because here you can also observe them during the day.



[Here a branch/trunk typically gnawed on by the beaver could possibly be set up as an object to be touched].

#### Section 7:

Now you can see the end of the trail. The Rhine glistens and since the Rhine is particularly narrow at this point, you have a good view of the Swiss village of Gottlieben on the other side of the riverbank. It is not unusual to share the viewing platform with countless ducks or swans. A corner bench invites you to linger.

#### Way back:

Now it is time to return. Use the time to listen to the birds singing or the crunching under your feet, because the Wollmatinger Ried offers pure nature enjoyment in every season!

## Reichenauer Dam:

### Introduction:

Since 1838, the island of Reichenau has been connected to the mainland via a 1.8 km long dam. 600 poplars line the trail and accompany us from the Kindlebildkapelle to the Bruckgraben and let us marvel at the nature and biodiversity in the Wollmatinger Reed.

A reed is a biotope that is characterised by seasonal flooding. The regular flooding of the reed means that only species adapted to such extreme situations can live here. Most "common species" are therefore unable to survive here. However, floods also represent a stress factor for reed specialists such as the bird's-eye primrose. The bird's-eye primrose is a small herbaceous wildflower with summery bright purple flowers; the individual petals are heart-shaped.

### Section 1:

The neatly lined up poplars are a striking starting point for the trail. A closer look reveals a nesting aid on almost every tree. Round and square, large and small bird and bat nest aids provide a home for different species. The size of the entrance hole and the height at which the nesting aid is attached are decisive for which species settles.

If you look away from the impressive rows of poplars, you will see vast expanses of reeds. Reeds grow more or less as a monoculture. Very impressive is the great variety of animal species living in the reeds. Thus, a variety of animals and plants can be discovered to the left and right of the dam. Among them spawning fish and breeding birds such as the Eurasian reed warbler, that at the end of April, can be recognized by its rhythmic and raspy creaking voice "Tiri tiri treck reck tiri dschäck dschäk" [insert a recording of the bird's voice here].

The small, well-camouflaged, light-brown bird is strictly bound to reeds or cane. It rarely flies but climbs skillfully from stalk to stalk. It even hangs its nest on the reed stalks. If the reeds continue to grow, this nest therefore is helped by a "natural elevator" to reach higher altitudes.

### Section 2:

A reed is a hotspot for biodiversity. Yet, without human care, large parts of the Wollmatinger Reed would be alluvial forests. Instead of red orchids and blue gentians, silver willows and black poplars would grow here. In the shade of the trees, the light-loving, often rare and protected meadow herbs and flowers could not thrive.

In summer, the reed carpet has reached a height of 3.5 m, obscuring the view of the lake. In late winter you can hear the metallic ringing of the titmice [insert sound track], in spring the "orrr-orrr" of the mating great crested grebes [insert sound track].

### Section 3:

We have just heard that the reed bed reaches an amazing height of up to 3.5 meters - and not without reason! In spring, reeds start a race with the water level of the lake. Due to the melt water from the Alps, the water level starts to rise rapidly from April onwards, which is the time when the reeds sprout. Reeds can grow up to 4 cm per day during this period and usually win the race. However, there are years when the water wins and the young reeds die. Only a few other plants can keep up with this rapid growth. Among them is hedge bindweed, a climbing plant with white, bell-shaped flowers about 3 cm in diameter. It climbs up the reed stems like a spiral staircase and can enjoy the sun at the very top. Despite their amazing height, reed stalks are often no bigger in diameter than a straw.

#### Section 4:

After about 1.5 km, the reed thins out and the lake can be seen to the left and right. Simultaneously, the surrounding sound also changes. Whilst in the dense reeds the scratchy song of Eurasian and great reed warbler, the "zig-zag-zillit" of the common reed bunting can be heard, ducks, swans and other water birds occupy the rather open bays in the reed.

From June onwards, the first families of waterfowl appear in the bays of the Reichenau Dam. Common species such as mallards, coots, red-crested pochards and great crested grebes and, with a bit of luck, black-necked grebes. Especially coots are very common and can be easily observed. They are pigeon-sized black waterfowl with a prominent white frontal shields and bright white beak. Their call sounds like "püch".

From September onwards, the Wollmatinger Ried becomes a hub for international bird migration: flocks of swallows, starlings, plovers and curlews as well as Northern shoveler use the protected area to rest and "refuel" for their further flight south.

#### Section 5 (Schopflen Ruin):

Good observation opportunities are offered by the platform at the Schopflen ruin, which provides a magnificent view of the lake and the Ried. To get to the platform, however, you have to cross the busy road. You can reach the viewpoint at 10 meters height via a wooden staircase with metal railing. Because of the busy road, a visit to the Schopflen is worthwhile especially in the early morning and evening to enjoy an undisturbed listening experience.

In winter, the picture of the lake is dominated by feathered winter guests. 75 % of the wintering water birds in Baden-Württemberg spend the winter at Lake Constance. Around 250,000 birds, 40,000 to 50,000 of them in the Wollmatinger Reed! The rustling of the rising flocks, the calls of the coots and ducks can be heard from far away.

#### The end:

Another 600 meters and we reach the end of the dam. Instead of the natural reed, we now see water sports enthusiasts in canoes and young people on stand-up paddles. Now there are three options, a) continue walking and explore the island of Reichenau, b) take the bus at the stop Oberzell Bruckgraben back to the starting point or c) start the way back and maybe experience some new impressions, sounds and noises.

## Images



Info Pfad Wollmatinger Ried, example of an info board difficult to access due to the vegetation (GNF Archive)