

Are free-roaming Wisents tolerable in the Jura mountains?

A 10-year field experiment on the reintroduction of the endangered biggest wild European animal in the Jura

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A brief portrait of the Wisent:

Wisents (European bison) are big wild bovids native to Europe. Bulls weigh between 500 kilograms and a ton, and cows between 300 and 500 kilograms. The Wisent is a ruminant and feeds exclusively on vegetation. Its diet consists of grass, herbs, leaves, young shoots, roots and tree bark. Adult animals require around 30 to 60 kilograms of food per day. Wisents are known to be placid and peaceful grazers, moving in herds of eight to 20 cows, juveniles and calves. Bulls typically linger at the fringes of such groups. They live either alone or in groups of up to seven animals.



Herds of free-roaming Wisents (as of 2014):

By R. Kowalczyk, 2014

Red and blue stand for different lineages. The arrow points to the Wisent Thal project area.

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Summary

Some 1000 years after the eradication of the largest remaining wild animal in Europe, it may be possible to reintroduce the Wisent in the Jura mountains and thus make an important contribution to the preservation of this endangered species. However, it is uncertain whether the positive experiences with free-roaming Wisents in other countries can be applied to the Swiss Jura region. The aim of the project Wisent Thal is thus to address this question: with a well-monitored and supervised test herd of five to maximal 25 Wisents, initially enclosed and later released into the wild, it will be evaluated over approximately 10 years whether Wisents can live as wild animals in the Jura and whether they are sustainable. In parallel, the people living in the region will be familiarised with the species. The project is of public interest in Switzerland, as confirmed by the Federal Court.

Thanks to GPS collars, the whereabouts of the released herds are always known. Researchers will investigate the herd's feeding habits, behaviour toward people and livestock, and various facilities. Any potential damage caused by the animals will be systematically documented and compensated to the affected parties. This also applies to extra costs incurred as a result of the wisent presence. A large accessible enclosure with five to 10 Wisents during the initial years will generate positive interest in the wild living Wisents and allows people to experience the animals in the Jura landscape. This will help to dispel any fears about the animals and serves for practice-oriented studies. At the centre of communication with the public will be the "Wisent Ranger". He will always be available to provide information, advice and assistance to people who come into contact or conflict with the Wisents, arriving quickly on the scene whenever needed.

The project Wisent Thal wants to achieve the following goals over the 10-year period:

- To verify whether Wisents can live wild in the Jura mountains and whether they are a sustainable addition to this cultural landscape.
- To familiarise the people living in the region with the Wisent species.
- To initiate the reintroduction of the Wisents in the Jura mountains, provided that the Wisents are sustainable in this area.

The project is supported by the "Verein Wisent im Thal", an association with a limited number of members who are well connected to related projects in Europe and local stakeholders. The total budget for 10 years is approximately 3.9 million CHF, of which around 1.5 million CHF can be generated through guided excursions to the Wisent herd, as well as through the sale of items and memberships in the association "Verein Freunde Wisent Thal".





Vision, goals of the project

Wisents (European bison) once roamed almost the entire Europe. Like many other places, the Wisent was already extinct in Switzerland during the Middle Ages. About one hundred years ago, Europe's largest remaining free-roaming mammal nearly vanished completely. Similar to the Alpine ibex, the Wisent only survived on protected aristocratic hunting grounds under human care. For the past several decades, Wisents have been living in the wild in Eastern Europe, and three years ago they even found a home in the German Rothaar mountains, including in operational commercial forests. Positive experiences with Wisents elsewhere give the project hope that the Wisent could also become native to the Jura mountains once again. A free-living population would be a significant contribution to the conservation of this still endangered species.



It remains to be seen whether the experiences from other countries can be transferred to the Swiss Jura mountains. The wild Wisents that have been free-ranging in Eastern Europe for a few decades mainly inhabit landscapes with more extensive land use practices, differing from those in the Jura at least in terms of agriculture. Before the reintroduction of the Wisent in the Jura mountains can be realized, it is therefore necessary to investigate the animals' behavioural patterns, their impact on the landscape, and how their behaviour and distribution can be influenced if necessary. The Wisent Thal project precisely serves this purpose.

Project goal 1: With a well-monitored and supervised free-ranging Wisent test herd consisting of five to a maximum of 25 animals, it will be evaluated over approximately 10 years whether Wisents can live as wild animals in the Jura, and whether they are sustainable in this cultural landscape.

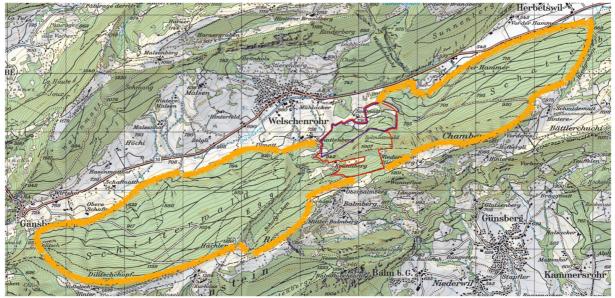
Project goal 2: People living in the region should be familiarized with the largely unfamiliar Wisent species.

Project goal 3: If the Wisent can integrate well into the cultural landscape, the project will mark the beginning of the reintroduction of Wisents in the Jura mountains, which represents a significant step towards the conservation of this endangered species.

Concept, approach

Overview:

The project Wisent Thal consists of four key complementary components: controlled release herds, controlled release enclosures, Wisent Ranger, and scientific accompanying research.



Map 1: Location of the reintroduction enclosure in Phase I (magenta) and Phase II (red) and presumed grazing area of the test herd after removal of the fence in Phase III (planned perimeter in yellow).

Controlled reintroduction of the Wisent test herd in three phases:

The controlled reintroduction of the test herd occurs in three phases with increasingly larger areas, with the animals being fenced in during the first two phases and able to roam freely within a defined area during the third phase. The individual phases are detailed below.

Thanks to GPS collars, the herd's location is always known even after reintroduction into the wild. The well-being of the animals and the social structure of the group will be monitored daily in the field.

Any potential damage caused by wildlife will be systematically documented and compensated to the affected parties, including extra expenses incurred due to the Wisents.

The Wisent test herd has the legal status of a free-ranging herd under the responsibility of the "Wisent im Thal" association, rather than that of released wild animals. This ensures easy access to the animals by the association and regulates issues of liability. Releasing Wisents would require approval from the federal authorities. If the test shows positive results after ten years, the Canton of Solothurn can submit a request for release to the federal authority. The "Wisent im Thal" association does not have the legal jurisdiction of doing so.

In **Phase I**, lasting two years, the Wisent test herd will remain a 51-hectare enclosure to acclimate to the Jura landscape. The area consists of one-fifth meadows and pastures and four-fifths forests with varying structures. The enclosure is partially electrified and partially fenced with a 'semi-permeable' wire fence, which can be easily passed by wildlife up to the size of deer and wild boars but is impassable for Wisents. After a several-month acclimatization period, investigations into the behaviour of the test herd and any associated conflicts were started.



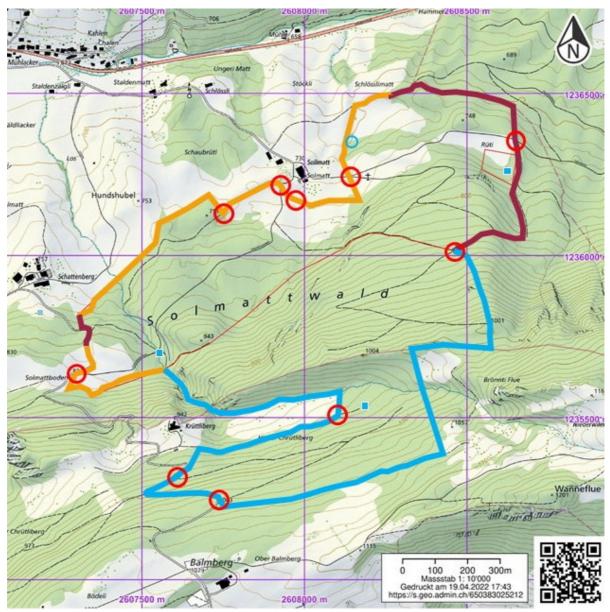


Map 2: The reintroduction enclosure in Phase I. The electric fence is lighter-coloured and the semipermeable wire cable fence darker. Gates are marked with red circles and watering stations with blue squares.

After the Wisents have acclimated and familiarized themselves with their surroundings, the electrically fenced area will be expanded to 106 hectares for Phase II. Over approximately three years, further investigation will be conducted to assess the feasibility of allowing the test herd to roam freely in the subsequent Phase III. The areas within the enclosure will be used for normal agricultural, forestry, and hunting activities during this time. Most of the land within the fenced area in Phase II belongs to the Solothurn citizen community. Passages and access points will ensure that the area remains accessible for pedestrians and forestry vehicles as usual.

In **Phase III**, the fences are removed. Now, the test herd can roam freely within a predefined area of approximately 7 square kilometres, including the adjacent forests of the first Jura range. Due to the existing pasture fences, the Wisents will only be able to leave the forest in a few places during the third phase. Phase III will show whether free-ranging Wisents indeed do not cause significant damage in agricultural areas, as the "Wisent im Thal" association assumes, or whether any damage can be prevented with simple measures. Furthermore, in this phase, any remaining questions regarding conflicts with forestry may be addressed, as the Wisents now have access to various types of forest.





Map 3: The reintroduction enclosure in Phase II. The semi-permeable wire cable fence from Phase I is darker-coloured. Electric fences are shown in orange (taken over from Phase I) and blue (newly installed for Phase II, with thin lines as variants). Gates are marked with red circles and watering stations with blue squares.

Wisent enclosure, observations of the test herd:

Encounters with the Wisent test herd during Phases I and II serve to generate positive interest in wild Wisents, make the animals accessible to everyone in the Jura landscape, impart knowledge, and dispel any fears about the animals.

The Wisents may not always be easy to find in the over 50-hectare area and may need to be searched for. Visitors should not leave the existing marked trails, and some rules of conduct must be followed to enter the enclosure. Visitors can enter the enclosure alone or accompanied by the Wisent Ranger or by Wisent Guides specially trained by the project for this purpose.

The enclosure is easily accessible by public transportation. The nearest bus stop is located 900 metres away, with a travel time of 24 minutes from the Balsthal train station and 8 minutes from the Gänsbrunnen train station. Visitors arriving by car can park at the public parking lot on Dünnernstrasse in Welschenrohr. The walking path to Sollmatt is signposted from the parking lot and the bus stop 'Welschenrohr, Unterdorf'.





During Phase II, the test herd will roam around a 106-hectare area and is now even more difficult to locate than in Phase I. The offering of paid tours to the test herd, along with additional information about Wisent, will continue. Here, various traces of the animals can be shown, and information about Wisent and the forest can be provided. Thanks to radiotelemetry, the guide can almost always locate the herd, but sightings cannot be guaranteed due to the challenging and rugged terrain. The guide also ensures that the visitor group does not approach the Wisent herd too closely, so as not to disturb them.

In Phase III, when the test herd is expected to roam over an area of several square kilometres and therefore becomes even more challenging to observe, the location remains visible for the ranger and project staff thanks to GPS. If the experiences with guided visits during Phase II are positive, this offering will be maintained during Phase III as well. However, visitors will need to accept long, sometimes multihour walks to reach the herd.

Wisent Ranger:

Thanks to professional communication, all affected or interested individuals are kept informed about the project's progress and current events. This is facilitated through the project's website, social media channels, electronic newsletters, and targeted printed materials. However, the main communication hub is the "Wisent Ranger", Benjamin Brunner. He provides information, advice, and assistance to individuals who come into contact or conflict with the Wisents, especially during Phase III of the project. He is always available and quickly responds to incidents. The Wisent Ranger also assesses any damages or additional costs that need to be compensated to farmers, forestry companies, or other affected parties. Additionally, he organizes trusted individuals to estimate such damages. Finally, the Wisent Ranger offers excursions into the Wisent area, during which information about Wisents and the Wisent Thal project is provided on-site.

Scientific project management, research:

In addition to the operational project management, Project Leader Otto Holzgang (Ballwil) oversees the scientific project research and maintains contact with all major research and reintroduction projects abroad. For the scientific accompanying research, the Wisent Thal project collaborates with existing university research institutions and covers the material costs of master's and bachelor's theses.

The accompanying research investigates food selection, herd behavior towards humans, livestock, and all kinds of facilities. Research questions are complemented and refined based on the desires and concerns of local stakeholders and interest groups, ensuring that the project provides precisely the answers that are relevant to the questions regarding the feasibility of free-living Wisent.

Additionally, the research examines how the behavior of free-living Wisent can be specifically influenced. In particular, it seeks to determine whether and how Wisents can be kept away from areas where they could cause significant damage.

Project carrier, project team, partners

The association "Wisent im Thal", based in Welschenrohr, is the carrier responsible for the project. The founding members are Benjamin Brunner (Welschenrohr), Stefan Müller-Altermatt (Herbetswil), Stefan Schneider (Welschenrohr), and Christian Stauffer (Gondiswil). Delegates of sponsoring organisations or local stakeholders may join the association, but the association deliberately aims to remain small, with no more than five to 10 members. The association is responsible for strategic project management and the employment of staff to run the Wisent project. It will be the holder of the Wisents and liable for any damage by the animals.

For the 10-year project, the "Wisent im Thal" association is hiring a project team to cover the following functions:

- Scientific and administrative project management (30% position),
- Wisent Ranger (50% position),
- Wisent Guides (hourly rate)
- Project secretary, administration (20% position),
- Temporary assistants (50% position),
- Civilian service personnel (100% position).

The "Freunde Wisent Thal" association financially supports the "Wisent im Thal" association and assists in public relations, as well as providing practical help for the project. Currently, over 200 individuals are registered as friends.

A support group ensures that the necessary investigations are carried out correctly, providing the technical basis for a decision on the semi-free Phase III. In assessing whether the Wisent is viable in the Solothurn Jura, the following thematic areas are considered: Ecological sustainability (forest, nature conservation), economic sustainability (forest use, agriculture), and social sustainability (tourism, danger, accidents (including vehicles), perception).

The test herd is provided by the Wildnispark Zürich Langenberg (https://wildnispark.ch/tierpark/). They assemble the Wisent herd in consultation with the European Endangered Species Programme (EEP and procure individually suitable animals from various Wisent herds in Europe according to the EEP's genetic criteria. This makes the animals an important part of the EEP, which ensures the survival of this endangered species.

The project closely collaborates with the "European Bison Conservation Center" (http://www.bisonebcc.eu/). The association "Wisent im Thal" joined the organisation "European Bison Friends Society" (http://www.smz.waw.pl/) after the start of the project. This collaboration ensures an optimal integration of the Wisent Thal project into the European projects for the conservation of the Wisent.



Timetable

- June 2017: Start, association "Wisent im Thal" founded
- June 2017 to October 2018: Planning, discussions with public authorities, stakeholders, critics, start advisory group, fundraising
- October 2018: Applications for the necessary permits submitted
- Summer 2019: Scientific investigations initiated and baseline studies conducted
- March 2020: Building permit granted
- March 2020: Project commencement (legal validity following Federal Court ruling)
- Summer 2022: Enclosure Phase I constructed, animals procured, continued scientific accompanying investigations
- 15. Sep. 2022: Arrival of the Wisents in the acclimatization enclosure
- 3. Nov. 2022: Enclosure Phase I opened to the public
- 2024: Expand enclosure for Phase II
- 2026: Evaluate Phases I and II, apply for approval for supervised semi-free test herd
- 2027: Remove fence from release enclosure, release supervised semi-free test herd
- 2027 to 2031: Intensive observation and care of the test herd, scientific accompanying research
- 2031: Evaluation of experiences, decision on the feasibility of free-roaming Wisents in collaboration with the relevant authorities of the Canton of Solothurn
- 2032: Application for the release of Wisents to the Federal Government or capturing/shooting of the test herd

Budget, financing, compensation

The total budget for the project is approximately CHF 3.9 million CHF, of which around 1.5 million can be generated through guided tours as well as through the sale of items and memberships in the "Verein Freunde Wisent Thal" association. The remaining funding is secured through third-party funds and the "Verein Freunde Wisent Thal" association.

The municipality of Solothurn, as the most affected forest owner, will be compensated with an amount equivalent to that agreed upon with the Canton of Solothurn for a forest reserve for providing the forest for the test herd during the duration of the project.

The owners of the forest areas where the Wisent herd will roam during Phase III will also be financially compensated. The corresponding arrangements must be still negotiated and contractually agreed upon.

Throughout the entire duration of the project, normal and planned forestry use is desired in the area of the release enclosure and its surroundings. For any potential forest and agricultural damages caused by the Wisent test herd, the "Wisent im Thal" association guarantees affected landowners' complete financial compensation. The terms of a fair assessment of any damages will be regulated in a contract between the association and a representative body of the potentially affected parties. Financial compensation for hindrance of hunting will be provided to affected hunting associations according to the Cantonal calculation model, as if these areas could not be hunted.