European mink news 2020-2021

CONSERVATION ACTIVITIES ACROSS EUROPE TO SAVE THE MOST ENDANGERED EUROPEAN CARNIVORE

This is the third edition of the European mink newsletter. The input for the newsletter was delivered by conservationists from Estonia, Germany, France, Spain and Finland who have been working on the conservation of European mink for many years. It gives a short overview of the conservation activities that were carried out in the different countries during the years 2020-2021. The aim of the newsletter is to reach a broader public (both governmental decision makers and the general public) in order to create awareness and support for the conservation of this small carnivore on the brink of extinction. For the last two years, European mink conservation activities have been affected by the COVID-19 pandemic. But despite the strict restrictions, collaboration between European mink breeding facilities continued. Everybody who is willing to play part in the conservation of this critically endangered species is invited to contact us.

Conservation activities for European mink in 2020-2021: summary per country

ESTONIA

Text by Kristel Nemvalts, Tiit Maran (Tallinn Zoo); Martin Silts, Selve Pitsal, Gennadi Kotsur (Foundation Lutreola); Nelly Mäekivi (University of Tartu)

LUTREOLA

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COVID-19 and the European minks

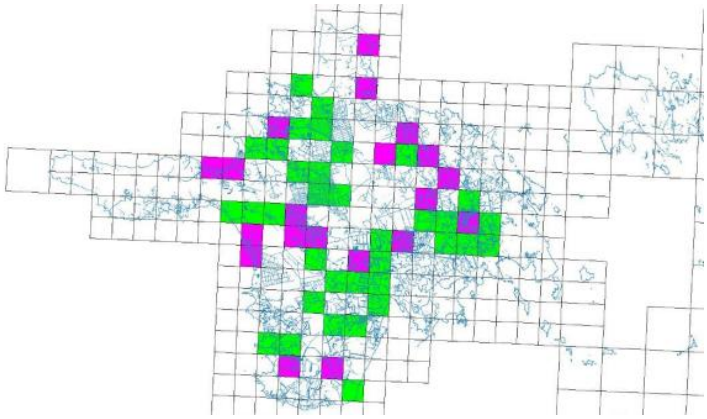
The year 2020 began with the news that mustelids may be susceptible to COVID-19 with possible fatal consequences, which means that strict precautions should be added to the animals' husbandry protocols in response to that. The European mink EEP had some help from the USFWS Black-footed Ferret Conservation Center, where the novel protocol was done in good time and it was possible to transfer the practices to the European mink guidelines as well. Mostly, it contained daily disinfection procedures and disposable masks and gloves. It is advised to follow these rules until there is more clarity about how dangerous this virus is to the European minks. Further, a transport protocol to avoid COVID-19 infections was added to the 2021 European mink EEP breeding recommendations. So far, there haven't been any notifications about COVID-19 infections among the European mink.

European mink population status in Hiiumaa

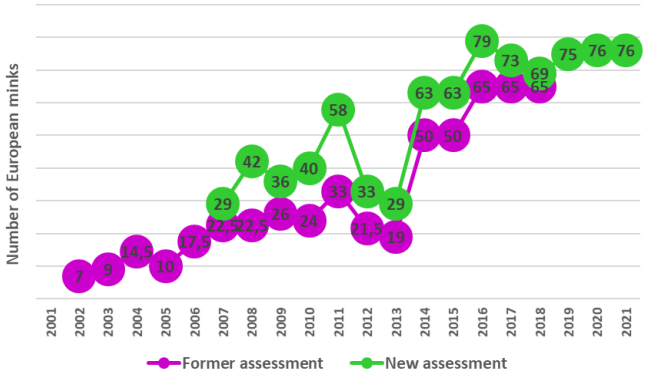
Due to the restrictions caused by the COVID-19 pandemic, live traps could not be used for monitoring European mink at Hiiumaa in 2020. But it was possible again in 2021. In the course of live-trapping, five male mink were caught, all of which were born in the wild, and one of them was previously captured in 2019. Mink traces were recorded in most of the searched areas and the captured animals were all in good health. There were 55 search areas, and European mink was recorded in 64% of them, which is the same as in 2019 and 2% less than in 2020.

Trail camera capture from Hiiumaa Island, Estonia (2021)

This allows us to think that the population size of European mink has stabilized at the island's bearing capacity limit. Population figures for 2021 remained the same as in 2020. Estimated post-winter minimum number of minks on the island is 61 and maximum 91. The autumn minimum is 151 minks and maximum 211 minks.



Distribution of European mink on Hiiumaa Island in the summer of 2021. UTM square (2,5x2,5km): purple – mink was not detected; green – mink was detected



European mink estimated average population size on Hiiumaa in 2001-2021. A new assessment (in green) has been included.

The mink food base (amphibians and small mammals) was monitored as well. Monitoring of amphibians shows that their numbers have not increased significantly, but in the long run, their numbers seem to be increasing slightly. As in previous years, the number of small mammals continues to rise.

Considering that no additional mink have been released to Hiiumaa since 2016, it can be said that a stable natural mink population has formed on the island. However, given the small size of the population, its continuous monitoring is crucial.

The exchange of European minks between EEP (EAZA Ex situ programme) and Spain: an update

In 2018, there was an exchange of three female European minks between Tallinn Zoo (Estonia) and FIEB (Spain). The aim was to breed these animals with the local males to make sure that the two populations are able to interbreed. For two consecutive years, two generations of crossbred litters were born, with a total of 15 pups in Tallinn Zoo. After the breeding experiments, all three of the original Spanish females and their 9 pups were sent back to Spain and the young were included in the 2021 release project in Aragon (more about that in the next chapter).

Actions in Saaremaa Island 2019-2021

The first European mink releases on Saaremaa Island occurred in 2012 as part of a pilot project. Unfortunately, the project was unsuccessful and a new one had been planned for some time. Luckily, Foundation Lutreola received funding from Estonia's Environmental Investments Centre (KIK) for a new 2019-2021 project, during which an inventory of the island's habitats was conducted and soft release enclosures for European mink were built.

In 2019, habitat abundance and quality of 177,1 km of rivers and streams were assessed mostly in the eastern part of the island. It was discovered that 73,1 km were of average or high quality.

In 2020, the best parts of four rivers (Leisi, Punapea, Võlupe and Riksu) with lengths of 4 km were studied further to find out the abundance of food species (gray fish, fish) and the relative load of predator species (mostly red foxes and raccoon dogs were caught on trail cameras), which were compared between rivers.

European mink soft release enclosure at Saaremaa Island.

Two rivers, Võlupe and Punapea, were assessed to have the best potential for inhabiting European minks, having a low predator load and a high number of prey species. A suitable place for the new enclosures was found nearby Võlupe river and they were built in 2021. The first inhabitants will hopefully arrive on the island in spring 2022.

Conservation breeding and a new facility in Tallinn Zoo

The long awaited European mink breeding facility at Tallinn Zoo was finished in 2019 and the animals have gradually moved into their new homes. The building has five enclosure modules with a total of 100 breeding pens and four larger pre-release enclosures. It is the biggest European mink breeding center in the world and can hold almost half of the EEP population.

In 2021, six litters were born in the new facility, with 29 pups in total (19 males, 10 females). 10 minks were sent to FIEB (Spain), 2 minks to Poznan (Poland), 2 minks to Riga (Latvia) and 2 minks to Helsinki (Finland). There haven't been any translocations to the wild since 2016.

European mink breeding facility at Tallinn Zoo, Estonia.

Locals' view on the European mink

In 2019/2020, the views of the local community of Hiiumaa on the reintroduction of the European mink were investigated. It was also examined how the local community of Saaremaa would accept European mink on the island. The community of Hiiumaa knows who the mink is: it is not an animal to worry about, and it does not really affect anyone. Thus, no one is acting maliciously against the creature. The opinions of Saaremaa people do not differ remarkably – the image of the mink is inconspicuous, safe and indistinguishable from many other small predators and people like its appearance. To enhance the involvement of the local community in the reintroduction process and the protection of the European mink in Saaremaa, several recommendations are made in the survey report "Euroopa naaritsa taasasustamise õppetunnid" (*in Estonian*).

SPAIN

Text by Madis Põdra (MITECO Tragsatec)

American mink control and monitoting of European mink

Trail camera capture of a European mink on a mink raft.

Although the removal of American mink has been successful in some regions, its (re)colonization still remains the main threat to the European mink. The mink raft method is now widely used for detection and capture of alien mink, and a monitoring network has been established within the range of European mink and in some rivers nearby. After the removal of the population from the Ebro basin in the provinces of Álava and La Rioja (2014 - 2016, in the framework of Life Lutreola Spain) a few American mink have been detected and captured in those border areas every year. The situation is similar in the whole distribution area of the native mink: a low number of American mink specimens have been captured in the Ebro Basin in Navarre, the province of Zaragoza in Aragón and the north of Burgos and Soria in Castile and León. Also, the species is scarce in the Cantabric rivers in the north of Basque Country and the north of Navarre, thanks to control measures that have taken place. Both, administrative staff (Ministry and Autonomous Communities) and experts are involved in this action in Spain.

The European mink is mostly distributed in the Ebro Basin, being scarce in the Cantabric rivers in the north of the Basque Country. The annual monitoring has been carried out in 17 UTM squares (10 x 10 km) in Álava, La Rioja and Aragón since 2019, and the results indicate, that the population remains rather stable. Also, recent studies carried out in Navarre, Castile and León show that the population persists in the areas without the presence of American mink. Different methods have been tested for European mink monitoring between 2019 and 2021 (hair-trapping, camera-trapping, and live-trapping) and currently, there is a discussion in the Working Group of the European mink on planning of monitoring in the whole distribution area.

Conservation Breeding


European mink kits born in a release enclosure in Salburua.

Conservation breeding continued in 2020 and 2021 similarly to previous years. The main effort was done in the two bigger centers, El Pont de Suert and FIEB, although smaller centers like ADEFFA (Barcelona) and Legarda (Álava) also participated in the breeding. Two male founders were captured in Navarre in 2019/2020 and incorporated into the captive population with the aim of improving the genetic-demographic situation of the captive population and increasing its overall viability.

In 2020, 27 pups were born in eight litters. Unfortunately, five of them died during the first few days/weeks, so the final number of pups was 22. Moreover, crossbreeding between the Spanish and EEP population continued and four crossbred pups were born in a litter of third generation in FIEB. In 2021, 28 pups were born in 9 litters, all of them survived. Currently, the size of the captive-population is 58 individuals.

Conservation translocations

After releasing 15 mink in 2018, the size of the captive population reduced significantly, and no releases were carried out in 2019. In 2020, population reinforcement was initiated again in the Ebro Basin, in Álava and La Rioja. A total of 34 captive-born mink were released in 2020 and 2021: 16 in Álava (Salburua wetland) and 18 in La Rioja (Najerilla river). All the released individuals were radio-tracked during the first two months. The results demonstrate, that the mink adapted well in their natural habitat – nearly half of them survived the first month and a third survived the first two months, as a minimum. From all the mink released between 2018 and 2021 (N=51), at least five have been detected more than a year later close to the release area.

After experimental breeding of Spanish and EEP mink in captivity, an experimental release of crossbred mink was carried out in 2021 in the upper-course of the Aragon river (Aragón). The release site is located close to the natural range of the species, with similar habitat conditions. A total of 22 crossbred mink were released. Eight of them were transported from Tallinn Zoo (Estonia) to Spain for this. As a result, more than 1/3 of the released mink survived the first two months, showing that crossbred specimens are able to adapt without major difficulties to the habitat available in Spain.

To examine the possible presence of SARS CoV-2 in the released mink, samples were taken from all individuals before release (both, Spanish and crossbred). A PCR test showed that all the European mink were negative for the presence of SARS CoV-2.

European mink release in Aragon, Spain.

FRANCE

Text by Maylis Fayet (French Biodiversity Agency (OFB), French National Action Plan for European Mink) and Guillaume Romano (Director of Zoodyssée, French European Mink breeding center)

European Mink National Action Plan, France

Drafting of the 3rd National Action Plan

The National Action Plan (NAP) is a multi-year document setting out the actions to be taken to restore the good state of conservation of the European mink in France. As previous programs have not improved the level of conservation (1st NAP 1999-2003, 2nd NAP 2007-2011, intermediate NAP 2015-2021, LIFE Vison 2017-2022), a 3rd NAP was drawn up in 2020. This document, validated at the end of 2021, defines the 13 actions that will be implemented over the next 10 years. These actions focus on improving knowledge (population cores, use of home ranges, etc.), developing the conservation breeding center of European mink and the strategy of translocations into the wild. Other priorities include limiting the effects of American mink and other alien species on European mink, combating other in-kind threats, and expanding communication and training. The priority action of this 3rd NAP will be the translocation of the captive born European mink into the wild.

Conservation breeding in France

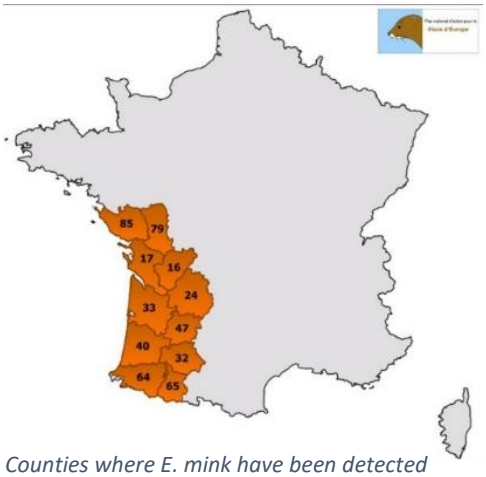
The breeding program conducted in two zoos continues. From Zoodyssée, 3 male European mink were sent to “Parc d’Isle” and “Réserve Zoologique de Calviac” in early 2021, bringing the population to 30 individuals (8 males 22 females). The captive breeding program of Zoodyssée was relatively successful: two litters were born with 9 pups in total (1 male and 8 females – similar to 2020 with 10 pups; 2 males and 8 females). Those births helped to maintain the population structure in a favorable state and they are a bearer of hope for future translocations. In Réserve Zoologique de Calviac no births were recorded among the 6 individuals (3 males, 3 females).

In addition to the captive breeding program, the two zoos continue to help raise awareness of the challenges of the European mink. A special "Science Festival" event took place at Zoodyssée on October 8 and 9, 2021. This was notably the opportunity to present an exhibition on *ex situ* and *in situ* conservation work of European mink to schoolchildren (approximately 500 children aged 5 to 11).

The Réserve Zoologique de Calviac received a UNESCO Biosphere Reserve Throhie in 2019. In 2021, the Biosphere Reserves meeting presented a good opportunity to introduce the work that was carried out on the European mink in Calviac.

Discovery of new wild European minks

European minks have been discovered in the counties of Pyrénées-Atlantiques (64), Dordogne (24) and north of Charente-Maritime (17). After an average of 15 years without certified data in these territories, the new data is hopeful. As part of the 3rd NAP, monitoring will be carried out to determine whether these are isolated individuals or genuine relict populations. In the latter case, those would be added to the populations already known in Charente (16) and Charente-Maritime (17) where reproduction in the wild was verified in 2021 by the LIFE Vison program (telemetric monitoring of individuals in 2020 and 2021). As a reminder, the European mink is still considered to be present in 11 counties in southwestern France (inventories are still in progress).



Counties where E. mink have been detected

Organized actions against the main threat factors of the European mink

The American mink represents a major threat to the European mink populations in France. A targeted fight is organized on all the colonization fronts going towards the population cores of European mink. Thus, to identify American mink tracks, more than 700 floating rafts are spread over strategic territories. When a mink track has been identified, a trap will be added to the raft to capture the animal. In addition, over 50 bridges were improved in 2020 and 2021 to reduce the risk of road collisions for European mink. For this, underroad improvements (corbels, dry nozzles) and protections were installed with the help of the owners.

A wooden plank path allows the mink to follow the stream without having to step onto the road.

Additionally, the French government has announced that by 2025 the country will be free of American mink fur farms. Currently, only one farm is active in France and it is located outside the action zone of the NAP. Finally, actions to raise awareness about the European mink and training of local actors are carried out in order to better include the species into account in the management measures taken on the territories.

GERMANY

Text by Eva Lüers, Ökologische Schutzstation Steinhuder Meer e.V.

European mink translocations

European mink territory (with a mallard) in June 2013, Germany

The first period of the Steinhuder-Meer-mink-project started in 2010, when the first twelve European minks were released. Until 2015, 42 adult European minks (up to ten minks/year) had been radio tracked to receive information about their health status, home range size, habitat use and dispersal. All minks were also marked with transponders.

During the second period of the ongoing project, since 2016, released European minks were also marked with transponders. Monitoring is mainly done with camera traps and transponder reading devices combined with camera traps. Mink rafts are also used to survey immigrating American minks (still not detected within the survey area) and European minks.

Monitoring results were low for the last three years, probably because of shifts in the habitat due to an extraordinary drought with extremely low water levels forcing the minks to undergo significant changes in habitat use. Higher predation risk within the former mink-territories is also assumed to be a reason for fewer observations compared to the years before 2018. Food supplies still seem to be good within the survey area. Recently, a European mink was caught on private ground adjacent to the survey area. The checkup showed a healthy animal with no transponder.


The renovated European mink enclosure in Korkeasaari Zoo, Finland

FINLAND

Text by Ulla Tuomainen, Korkeasaari Zoo

Renovation of the European mink enclosures

Korkeasaari Zoo renovated their European mink and otter enclosures. The enclosures got a new look and new water features, including several springs and bigger, deeper pools. The minks have 3 enclosures and a back-up enclosure to use. The renovation schedule was affected by COVID-19 and there were some delays along the way, but the work was finished in June 2021. The first European minks arrived in early September from Tallinn Zoo. The animals, Mask and Mileedi, have settled in nicely and the keepers have also started to train the female and she has been very eager to participate in the training sessions.

This newsletter was compiled with the input of many dedicated European mink conservationists. We thank all of them for sharing their knowledge and experience! Contact: kristel.nemvalts@tallinnzoo.ee and tiit.maran@tallinnzoo.ee