Promoting pollinators 12th November 2020

Learning from each other in the northern Europe - a collaboration

Here you can find the panelists' presentations: https://bit.ly/promotingpollinators
Here is the recording of the webinar: https://www.youtube.com/watch?v=6MjOz3VlfEw

Summary

Introduction of the project and network. Eirin Bruholt, La Humla Suse
Recording

The Nordic and Baltic countries, Sweden, Denmark, Finland, Estonia and Norway, have decided it is time to collaborate and learn from each other in 2019 and formed a new network on promoting pollinators. Our focus is on wild pollinators, especially bumblebees, and we want to promote their habitats – especially within agriculture.

Bumblebees are essential to our countries, as they are one of the most adapted genera of pollinators in northern Europe. They are responsible for pollinating plants which give us different types of fruits and vegetables managed bees are incapable of pollinating. Fruits such as blueberries and tomatoes are mainly pollinated by bumblebees, as these are plants other wild bees and managed bees struggle to pollinate. With the increased urbanization in our society, and modern technology and methods in agriculture, our wild pollinators are decreasing at a concerning rate. Some species have gone extinct, while others are on the national and IUCN red lists. It is time we learn from each other and start to collaborate.

In this webinar we have invited a lot of different speakers from the different countries. There will be farmers, politicians, biologists and conservationists talking about what they are doing in their country, as well as status reports on bumblebees. By sharing this information, we can learn from each other and make our measures more efficient. Several of these countries have or are currently developing a national pollinator strategy.

The webinar is funded by The Nordic Council of Ministers.The organizers are La Humla Suse from Norway, Pollinera Sverige from Sweden, Häme University of Applied Sciences from Finland, Agricultural Research Center from Estonia and Vilde Bier i Danmark from Denmark.

State, trends and measures for pollinators in Norway. Eirin Bruholt
Recording
National program for monitoring solitary bees and bumblebees in order to get a better overwied. There are 35 species of bumble bees in Norway. Five species are near threatened. 200 pollinators are on the national red list. Astrid Løken (1911-2008) was the researcher who has been monitoring bumblebees the longest in Norway (and was a spy at the same time). The Norway Pollinator Strategy was written in a large cooperation. Some of the main sectors were the voluntary sector, municipal authorities, private persons, environmental and agricultural sector, the environmental agencies and authorities as well as the transport sector. We see more people trying to help the pollinators. Farmers try to cultivate flowering zones and stripes on farmland. In 2016 a flower menu (Blomstermeny) with information about good food plants were made. None of the plants in this menu are invasive plants. We want to use the local sources, also local flower seeds. (NIBIO supply with seeds named Norsk blomsterengfrø).

State, trends and measures for pollinators in Sweden. Lotta Fabricius
Recording

There are 41 species of bumblebees in Sweden and 3 are extinct. There are funds reserved for promoting pollinators in the Swedish state budget (70 million SEF for 2020-2022).
The Environmental Protection Agency has divided their funding in three parts. There are local measures for supporting pollinators (LONA funding), most vulnerable wild bee species are supported as well as the monitoring of pollinators. There are also measures on testing identifying pollinators, pollinators exposed to pesticides and habitat modelling for green infrastructure. Pollinera Sverige is a large network organisation. We have a platform and try to raise national awareness on pollinators. Different projects are highlighted. The Beespoke project is an Interreg project in North Sea Region approaching the benefit of ecosystems and pollinators (https://northsearegion.eu/beespoke)
There is arranged an annual pollination week which gets a lot of hits on Google. It will be 15-23 May 2021 next time. There is also the 20th May World Bee Day and 22nd May Biodiversity Day. We try to get publicity in the media. We share knowledge by producing posters and booklets. The garden center Plantagen in Sweden, Finland and Denmark are also communicating with their customers. A network also on EU level www.polloinateeurope.org. We work with schools and find ambassadors and also distribute seeds with good pollinator plants. We have also made a price named Pollinator of the year. The price has been given to a farmer, seed company and researcher - all working on promoting pollinators. Our website is www.pollinerasverige.se

State, trends and measures for pollinators in Denmark. Jørgen Pedersen
Recording
Danish Red List from 2019 deals with all 292 species of bees on he Danish checklist. First list was put out in 2010, but only for the bumblebees. 48 species are not assets in Denmark, so 244 species are assessed. 19 species are estimated to be regionally extinct in Denmark. (8% of the assessed species) 7% are extinct. 19% are critically endangered. There are 29 species of bumblebees registered in Denmark. From 2010 to 2019 there is one more that has got extinct of the bumblebees. Bombus camprestris and B.humilis has increased. Bombus ruderatus has gone extinct. Almost 2/3 (60,4%) of Denmark is cultivated and it is nearly world record. The forest area is 14,5%. Open nature is only 8,7% which leave little space for pollinators. Majority of the red listed live in dry and sandy grassland in open landscapes and also small habitats of arable land. The threats are habitat loss and lack of flowers. The landscape is also monotonized. Soil treatment, use of pesticides and intensive beekeeping are also threats. As agriculture takes up a large space in Denmark the role of farmers and their advisors plays an important role in creating better opportunities for the bees. There is an upcoming pollinator strategy, measures on rewilding and research done by universities. Our organisation raise awareness and there has been published a map with 10 issues that can be carried out in the farming landscape in order to improve pollinator habitat.

State, trends and measures for pollinators in Estonia. Eneli Viik, Agricultural Research Centre
Recording
28 species from 29 were evaluated during the 5th Estonian evaluation of species (2017-2018). One is evaluated to be extinct, 1 is evaluated to be vulnerable, 4 near threatened and 20 of least concern. There is a national bumblebees monitoring in Estonia that started in 2006 in connection to Estonian rural development plan. There has not been any negative trends in Estonia on bumblebees. There is not enough data to evaluate solitary bees and now there has started a project collecting this information. There are 271 solitary bees in estonia. There have been evaluated 103 species of 116. Three are extinct, one critically endangered, 7 endangered, two vulnerable. 87 are of least concern. The amount of butterflies is rather stable in Estonia. Hawkmoths are considered to be the best pollinators. There are 11 species evaluated out of 17. Hoverflies are 221 species in Estonia, they are the best among pollinating flies. There is not enough data to say about their development. There is one measure about establishing foraging areas for bees and was started in 2015. It is related to honeybees. You have to have at least 10 hives. The forage area should start within a range of 200 m. YOu have to mowe, graze or chop it and cannot grow the next crop before 15th August. About 300 ha has been covered by this area. This measure has not been so popular, but we hope that it will be more farmers that want to use it. Environmental friendly management is about planting leguminous crops as2-5 m wide grassland on field margins.Organic farming do also promote pollinators. Measures on environmentally friendly horticulture (900 ha in 2019) and maintenance of semi-natural habitats (32200 ha in 2019) do also promote pollinators. Education, raising awareness and citizen science by using Facebook groups are important.

State, trends and measures for pollinators in Finland. Juho Paukkunen, University of Helsinki, Finland

Recording

There are four large orders of insects to where the pollinators belong: flies, mosquitoes, gnats and midges (Diptera, 7300 spp); Beetles (Coleoptera, 3800 spp.), Butterflies and moths (Lepidoptera 2600 spp.) Bees wasps and ants (Hymenoptera (7600 spp.) The most efficient pollinators are bees, but other groups like flies are very common in the arctic areas, mires and bogs where there are less bees. The populations of most butterflies have during the last 20 years been decreasing. The fluctuation between years is also large. Moths have been monitored since 1993. They are monitored by traps. Also here we can see a slight decline but the fluctuation is high. The fluctuation is mainly caused by Epirrita autumnata species and this is not a pollinator at all, but common in Northern Finland. We have less monitoring information about bumblebees. There are species that have decreased geographical distribution. Bombus lapponicus was previously found in the Oulu region but now only in the most northern areas of Lapland. B. terrestris (first found in 1993) and B.schrencki (first found in 2000) are spreading. The number of honeybees has been going up since 2010. One study has in Finland been carried out about yields in rapeseed and it has been decreasing. Andrena marginata, hoplitis robusta, bombus consobrinus and B.hyperboreus are threatened. Semi-natural grasslands are important and there are measurements on restoring them in Finland. Ca. 15.000 ha will be restored in the near future. The national pollinator strategy will be ready in September 2021. There has been a campaign on saving pollinators which was started by the national public broadcasting company Yle. 76000 actions were registered during this campaign. The Pölyhyöty project is going on and a new project on making advisorary material for farmers is starting up by Traci Birge at University of Helsinki.

Flowering zones and convertible husbandry, farmers with a local pollinator strategy. Matthias Hammarstedt, HIR Skåne, Sweden

Recording

The project Hela Skåne blommar is about removing farmers' obstacles in promoting pollinators. The seed has to be made available, it has be be created time when there is no time as well as making sure that it is possible to seed in the surfaces required. More than 250 farmers and 80% of them had not grown flowers before. We grow 600 km of flowering edge zones and also 200 ha flowering fallows. Farmers are proud as they can see bumblebees and the public is satisfied. There are small farmers with 50-100 ha and also big farms. The area was between some few hundred meters to 50 ha. There was used one perennial mix and another annual mix. The annual mix has a good weed control, long flowering, diversity in flowers, winter feed for birds and at the same time be attractive for people. The perennial mix looks different in different years, first it is intensive in flowers and later less intensive. The sowing was done with contractors. Then we got an efficient use of seed, all seeds were sown with a correct width of the seeding machine. This did not take time for the farmers and the contractors had great innovations carried out in order to do this job. There was made some marketing signs to be placed at the fields. Some side projects were also developed. In 2021 will the project expand to the whole of Sweden through Hushållningssällskapet.

The work behind the Norwegian pollinator strategy. Guri Tveito, Ministry of Agriculture, Norway

Recording

The most strategic is to take a cross-sectoral approach. This commitment is very important. There was made a parliamentary decision upon the issue already in 2016. There was also an increasing commitment in the private sector (NGO:s, teachers etc.). Because of this engagement there was already initiatives in the society. The Directorate of Agriculture arranged the first meeting. A technical report on common knowledge was written, named Faggrunnlag for nasjonal strategi for villbier og andre pollinerande insekt. The lack of knowledge has been the most limiting factor, but now we have better knowledge. A cost-benefit analysis had to be carried out, but we had little data on ecosystem services costs. From the technical report it was gained sufficient knowledge so that some actions could be targeted. Most sectors tend to put own problems as a priority and environment tend always to get less. We learned that it takes a lot of time in cross-sectorial work but we must remember that the process is as important as the results. The action plan it still being developed. One should build on commitment in public and private sector, and what has already been initiated. It is important to involve all levels - scientific, directorate and ministry level in order to get a common strategy. Good examples are also powerful measures. One can manage in a different way: cemeteries, local environment agencies, airports, public roads, construction industry with green rooftops, defence agency and operators of power systems. There must be established follow up mechanisms by arranging a meeting place for stakeholders (Pollinator forum), annual progress reports from all sectors, coordination on directorate level, follow up requirements given in management dialogue to directorates, municipalities and research institutes. There is being worked out a urban agricultural strategy in Norway which also will include pollinators.

Species rich infrastructure and pollinators - possibilities and difficulties. Johan Rydlov, road services, Sweden

Recording

Road verges are about ⅓ of semi-natural habitats in Sweden. We have also made sure that the road verges not will be a mortality factor and ecological trap for pollinators. We can have different management and designs versus mortality factors for pollinators. Road verges can be an important habitat for wild bees in a cultural landscape. Highways are complete barriers for small insects. The design of the road side can have an impact on habitat size, distance to traffic and also on type of soil and slope degree. The road verges is also reflecting the landscape history (via the seed bank in the soil). The road verge is also a quality in the monotonous landscape. In Sweden it has been a focus on species rich road verges. It was shown a map of the distribution of managed road verges for biodiversity in South Sweden today. The road verges should be a combined solution for geotechnical conditions, safety and ecological perspectives. Also railway yards can be rich in species and they also have their own management. In order to work with these issues we need science based socio-economic arguments for pollinators along infrastructure. At present there are 2 Phd. students working in a network with researchers from Lund University, SLU Uppsala and Swedish Transport Administration.

Flower strips in Danish farmland: Assessing the value of seed mixtures for bees. Yoko Louise Dupont, Aarhus University

Recording

Bees are under multiple pressures, the main being habitat destruction, pesticides and parasites and diseases. Climate change and competition also have an influence. There is too little food in early summer, around midsummer and in late summer. In our research it has been focusing on the seed mixture in flower stripes. We made a search for seed mixtures on flower mixtures on seeds. We did also obtain information about seed mixes from NGO-s and farmers. Different plants attract different pollinators. Phacelia attracts more honeybees whereas carrot attract solitary bees. Usually mixes with more diversity (and also more expensive) gives a higher degree of pollinators. *Field scabiose, Pantain, Birdfoot's trefoil*, and *Lucerne* have longer flowering periods than many other plants. Seed mixtures for enhancing bees in Denmark vary in plant species richness and composition. They vary highly in their value for bees. There are little wildflower seeds on the market in Denmark.

Monitoring bumblebees as a citizen science project in Finland. Janne Heliölä, Finnish Environment Institute

Recording

The global concern for pollinators is behind the project. It is a three year project (2019-2021) financed by the Ministry of Agriculture and Forestry in Finland. The project has three work package: status and population trends, establishing a national bumblee monitoring scheme and use of honey bees for crop pollination and its economical value. Volunteers were shought to test the monitoring in practice. The aim is to make a proposal on how the monitoring scheme can be carried out in the future (2021-). There are already pretty old bumblebee monitoring schemes in the United Kingdom and Ireland. The most suitable method is to establish transect routes, a walking route. The route should be easy to walk and between 500-1000 meters. It is divided into sections due to habitat types. You walked slowly once per month the route. Count all bumblebees in an area of 5 x 5 meters around. The project has a similar goal for butterflies. There is already data from 1999 of them. The same methods can be done with butterflies. The biggest problem was how to find motivated and able recorders. The group of experts that can identify bumblebees is far less than 50 people. Therefore we trained our own experts to do the monitoring. We lowered the part to participate and allowed room for inaccuracy. The solution was to accept records at varying levels of accuracy. (species level, species group level, merely bumblebee). This has been done now for 2 summers. Several new people were brought into the expert area. Most lepidopterists in Finland are eldery men (50-80 years), volunteers doing the monitoring in the project are younger women (20-50 years). It is expected that in a few years they will learn to identify (5-15) bumblebee species in their own areas.70 sites were monitored in 2019 with a total of 8690 individuals from 28 species (out of 37). In 2020 there were 100 sites monitored. In 2021 there will be a proposal on how to establish an on-going long-term bumblebee monitoring scheme for finland. This monitoring will support the National Pollinator Strategy that is under preparation.

A farmer's experience on flowering zones. Jostein Svalheim

Recording

I have a gran farm about 1 h from Oslo together with my father. We are working with organic and regenerative farming. In 2018 we went to a meeting that La Humla Suse arranged. We got in the beginning consultants coming to our farm and look for suitable areas. We got by email a management plan on how to take care of them. The goal of the management plan has been important for us. We have 3-4 zones to take care of. They are close to the farm. The instructions were to cut twice, one early and one after harvest later and remove the green matter afterwards. Grass species and nettle have been decreasing in numbers. More sunlight will come to ground and give better conditions for herbs and flowers. This has changed and we see an increase of flowers that were already there. Overall increase of biodiversity has not been seen yet. We think also we see more bumblebees, it may be we just notice them now. The management plan did really help, we did not have to think this out yourself. The plan is easy to follow and we can fit it in our work. As we can do this before and after our main activities at the farm it has not been difficult to carry this out. We have got information on what we can and cannot do and also what kind of results we can expect to see. La Humla Suse have been visiting the farm twice and we have got a list of species identified in our zones. The work has been inspiring for me and my farm. We have also got money to establish some new areas to take care of. It is important for farmers to try to help where we can in order to promote biodiversity. You have to persuade the farmers to care - some care more about nice meadows and meadows as others care for economical issues.