Interreg North Sea

Co-funded by the European Union

EXPBIO

So wild!

For people and wildlife

working together with nature

BOTANISKA
GOTHENBURG BOTANICAL GARDEN

In your hand you´re holding a short text about native wildflowers. Here you´ll find out why they are important for biodiversity and how you can help preserve it.

A wildflower area is an inspiring learning environment

Here you can study wildflowers and pollinators, look at seeds and seed dispersal, follow seasonal changes and the life cycles of animals and plants.

You can also experience and study biodiversity, ecosystem services, the cultural landscape and even reflect over sustainable development. Why not paint, write, enjoy, contemplate and more.

Life on earth depends on plants

Plants provide food, medicine, hiding places and habitats for so many living organisms. They produce the oxygen we breathe and they clean, store and circulate water. We are totally dependent on plants for our survival.

All living things– great and small – are important parts of the intricate web of life that makes up what we call biological diversity. When ecosystems are healthy, they are rich in diversity. A diverse natural world is stable and resilient.

Today we see that plants and animal species are threatened and disappearing at an alarming rate. We are destroying many habitats by using pesticides, polluting, causing climate change and bringing in invasive species that compete with native species. Research shows that a species is disappearing every hour, every day - all year, around the globe.

Sow local native wildflowers and tell your friends why they are so important!

Plant blindness - what is it?

"Plant blindness" is a term describing how plants are being overlooked and not valued. Today there are many people who cannot name our most common wildflowers.

If you can´t see and understand the diversity of plants, they can disappear without us even noticing. By learning the names of the plants, we build relationships with the plant world. Understanding nature is important for its preservation and the well-being of future generations.

We can make a difference! Everything counts! Help increase biodiversity and reduce "plant blindness" by sowing local native wildflowers on your grounds.

Why are native wildflowers important?

- The plants have a value in themselves and have the right to exist regardless of whether they are appreciated or used by us.

- The wildflowers have helped shape the environment for thousands of years. Some plants have come with agriculture and have a strong connection to cultural landscapes.

- Many animals are completely dependent on native plants for food. During the winter, seeds are an important food source for birds, mice and others. If plant diversity decreases, many more species will be threatened.

- Pollinators need food (pollen and nectar) and shelter. For many, it is important that the food is close to the nest. Butterflies need plants that are rich in nectar. Caterpillars, on the other hand, eat leaves from one or more plant species. These plants are called host plants.

- The roots of plants bind the soil around them so that nutrients do not leak into waterways and affect rivers and seas.

- Many plants contain substances that are used in medicines. For example, substances from the foxglove are used to treat heart conditions. 40% of the medications that are today prescribed by doctors today originate from the plant kingdom.

- Our wildflowers are also important for culture and traditions. What would a spring be without snowdrops or wood anemones?

- The wildflowers make the landscape more beautiful and that makes us feel good too!

Why are pollinators important?

About 90% of all flowering plants need pollinators to be pollinated. Pollination is when pollen is transferred from one flower to another with the help of animals, wind or water. After this, fertilization takes place in the flower and then seeds can be formed.

Here, pollination takes place mainly with the help of insects, such as bees, bumblebees, butterflies, flies and beetles. Bees and bumblebees are the most important pollinators.

Without pollinators, there would be very few crops. In some parts of China, apples must be pollinated by hand as the insects have disappeared due to the use of poisonous pesticides. We are dependant on pollinators for food since a large part of what we eat comes from plants that are insect pollinated.

Pollination is called an ecosystem service and is completely free!

Did you know that insects and flowering plants have evolved together over millions of years?

Pollination is called an ecosystem service and is completely free! Insects have special mouthparts that are adapted to collecting food from flowers. Like a lock and key, there is no key that fits all locks. Therefore, the mouthparts of some insects just fit into certain flowers. Butterflies use a proboscis to suck nectar while bumblebees have tongues. Some species have long, others short.

Many long-tongued bumblebees are endangered as the plants they visit have become scarce. A diversity of plants is required for a diversity of insects, for a diversity of birds—for a diversity of life!

Create an easy-to-maintain wildflower area!

Preparations for sowing

Watch the instructional videos before going out.
You can find them here: botaniska.se/savilda

- Find a sunny spot, preferably with a sandy or gravely soil, where many can see and enjoy your wildflowers. Never use fertilized soil.
- Short-cut lawns are so lifeless that scientists call them green deserts. Transform them into blooming oases —but don't forget to ask the landowner for permission first!
- Never sow close to sensitive wildlife areas, such as nature reserves. Ask if you are unsure.
- Check the instructions on the seed packet to find out how many square meters the seeds will cover.
- Do you want to sow in pots or pallets? That works too!

You will need:

- rakes
- shovels
- watering can or hose
- local native wildflowers seeds!
- a sunny day

Make sure to:

- Remove weeds (especially grass) and don't forget the roots
- the soil should be crumbly and preferably sandy or gritty, (many wild flowers need nutrient poor soil) mix in sand to make the soil more suitable if needed

- before sowing, mix the seeds with sand, this makes it easier to sow evenly over the surface
- lightly rake the soil so that it just cover the seeds - water

- put up your sign and make a simple fence until the plants have grown
- water a little if it is dry, otherwise the plants will be fine

- enjoy a blooming buzzing oasis for people and the planet

Please share your experiences during the season on Instagram! Tag **#såvilda** and follow us at **@sa_vilda** to keep track of the project and get more flower meadow tips!

What is in the seed mix?

Annual and perennial native wildflowers. Annual plants germinate, grow, flower and set seeds under the same summer and then wither. The seeds survive the winter and germinate, either the following year or several years later.

Perennial plants bloom for several years. During the winter, perennials store nutrients and water in their roots and tubers. Perennial plants produce leaves in the first summer then bloom the second summer and many years thereafter.

Annuals

june - aug

Cornflower *(Centaurea cyanus)*

Has, like several other "field weeds", decreased due to of the cultivation methods of modern agriculture. The scientific name of the plant tells you something about the plant. *Cyanus* means blue.

july - sep

Narrow-leaved rattle *(Rhinanthus angustifolius)*

Semi-parasite that sucks nutrients from grass. When the seeds are ripe, they rattle inside the capsules.

june - july

Corncockle *(Agrostemma githago)*

A troublesome weed in fields of rye or barley that was common until the 1950's. The seeds are mildly poisonous, very problematic when they ended up among grain that was ground into flour.

june - aug

Common poppy *(Papaver rhoeas)*

Has decreased in numbers due to intensive farming. Flowering common poppies covered the battlefields after the end of the World War 1 and have therefore become a symbol for the fallen soldiers.

june - sep

Corn chamomile *(Anthemis arvensis)*

Pollinated mainly by flies and beetles. The plant's name *arvensis* means "one who belongs to the field" and it is where it likes to grow. Similar to a daisy but is smaller, has different leaves and scent.

Perennials

june - july

Quaking grass *(Briza media)*

With heart-shaped flowers, it glitters in the field. Pollinated by the wind like all grass but is an important host plant for several butterfly species.

july - oct

Northern Hawkweed *(Hieracium umbellatum)*

Hawkweeds belong to one of the largest families of flowering plants, the daisy family (Asteraceae). The hawksbeard mining bee is an endangered species that is highly dependent on hawkweeds.

may - july

Sheep fescue *(Festuca ovina)*

A grass with narrow curled leaves. Grows in tufts on poor soils. Ovina comes from Latin ovis, meaning sheep. It is said to be a sheep favourite! Many butterflies have sheep's fescue as a host plant.

june - july

Kidneyvetch *(Anthyllis vulneraria)*

All pea plants live in symbiosis with nitrogen-fixing bacteria. Which basically help to fertilize the plant. The small blue butterflies' caterpillars´ are completely dependent on kidney vetch and are today threatened.

may - june

Cowslip *(Primula veris)*

Veris comes from the Latin word for spring and the genus name *Primula* from primus meaning, first. The cowslip is an early bloomer providing food for early insects.

june - aug

Tufted vetch *(Vicia cracca)*

Used earlier as a fodder plant - that is that it was grown for livestock. A member of the pea family and an important food source for several endangered species of solitary bees.

june - aug

Wild majoram *(Origanum vulgare)*

The herb oregano is dried leaves of this plant and its relatives. Rub the leaves and feel the scent! It attracts bumblebees, bees and butterflies and is a ancient medicinal plant that can also dye textiles red.

june - july

Bird's foot trefoil *(Lotus corniculatus)*

Many butterfly species favorite as a host plant for their caterpillars. The species name *corniculatus* comes from Latin *cornu* meaning horn, referring to the flower bud ending in a curved tip.

Musk-mallow *(Malva moschata)*

june - sep

A beautiful musk-scented plant that is visited by many species of hoverflies, butterflies and bees that feast on the pollen and nectar. But it is mostly pollinated by bees.

Ox-eye daisy *(Leucanthemum vulgare)*

june - july

Vulgare means ordinary, but today even the ox-eye daisy has also become less common.

Brown knappweed *(Centaurea jacea)*

july - sep

With its purple flowers, lots of nectar and pollen it attracts many different pollinators. Several caterpillars are dependent on brown knapweed for food.

Yarrow *(Achillea millefolium)*

july - oct

The genus name *Achillea* refers to Achilles, who is said to have treated his soldiers' wounds with yarrow during the Trojan War. More than fifty insect species depend on the plant for food and shelter.

Peach-leaved bellflower *(Campanula persicifolia)*

july - aug

Look into the flowers in the evening! Sometimes you can see a bee asleep inside. The seed capsule has three small compartments each with a door that opens and releases the seeds when they are ripe.

july - sep

Ribwort plantain *(Plantago lanceolata)*

Just like its relative's hoary plantain and plantain, it has also been used as a medicinal plant. The flowers can self-pollinate but they are also pollinated by insects.

june - aug

Field scabious *(Knautia arvensis)*

Has been used to heal skin conditions and the plague. It looks a bit like Devil's-bit scabious which flowers later.

aug - oct

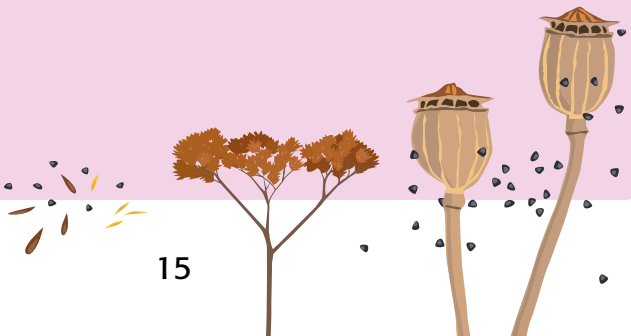
Devil's-bit scabious *(Succisa pratensis)*

The Small scabious-mining bee's name comes from its dependence on pollen from its flowers. *Succisa* means bitten or cut off, referring to the root. People used to think that the devil had bitten it off.

A learning environment - all year round

What do we do when autumn comes?

- Let the plants flower and seed before you cut your meadow.
- Make sure to collect seeds during late summer to the end September. It is important to allow the seeds to dry so they don't mold.
- A good time to mow is from late August to early October. The best way is to cut the meadow with a scythe, but you can also carefully use a trimmer.
- Be careful not to shred the stems as this will help to fertilize the soil, which is not good for the wildflowers.
- Cut low down on the stem making sure not to damage the leaf rosette (the leaves closet to the ground).
- Leave the cut hay on the ground for a couple of dry days. Then the seeds have time to ripen and fall out. Make sure to rake up the dry hay and remove it from the meadow and put it on the compost.
- If you want to create a new flowering area, you can sow already in the autumn.
- Make sure you have a long-term maintenance plan.



So wild!

The goal of So wild! is to engage children and adults in the local environment, help them learn more about wildflowers and promote the biological diversity.

The flower meadow is easy to maintain and can be used when teaching many subjects at school. It can open up new opportunities. and help create new relationships with nature.

A little step towards a sustainable future.

Text: Helen Ekvall
Layout and illustration: Ellinor Smederöd
Photo: Ellinor Smederöd, Jan Thomas Johansson, Maria Sjöstedt & Stina Weststrand

The text has been produced by Gothenburg botanical garden
in collaboration with the Gothenburg Global Biodiversity Center (GGBC)
at the University of Gothenburg (GU) with funds from EXPBIO

BOTANISKA
GÖTEBORGS BOTANISKA TRÄDGÅRD

GÖTEBORGS UNIVERSITET

Interreg North Sea

Co-funded by the European Union

EXPBIO

FSC
www.fsc.org
MIX
Papper från ansvarsfulla källor
FSC® C105095