



sphagnum  
*Sphagnum* sp.

## How are raised bogs formed?

Mires are wetlands with thick layers of peat, consisting of dead and partially decayed plant material. The main reason for the slow decay is that there is practically no oxygen in the waterlogged soil. Most decomposers need oxygen and cannot survive here. Without these organisms, there is no decay and the bog rises in height. The peat layers in Komosse are between three and four metres deep, but in some places they are more than eight metres thick. The bog has formed over thousands of years and has grown on average 0.5 mm per year.

Mires can be divided into fens and bogs. Fens receive water and nutrients both from rainwater and from surrounding mineral soil, and are therefore nutrient-rich. In bogs, often located in the central parts of the mire, the peat layer grows upwards, resulting in a domed surface. Water runs off from the central parts of the bog to the outside edges. The bog only receives nutrients from rain and snow and is therefore poor in nutrients and plant species.



red-throated loon  
*Gavia stellata*

Raised bogs are formed in areas with high precipitation and low evaporation. The circle of wet zones on the outer margins of the raised bog is known as the lagg. This leads away water coming from the domed surface of the bog.



willow tit  
*Poecile montanus*

## Birdlife and the wetlands

Meadow pipit is the most common bird on Komosse. It is a small bird that breeds in open landscapes. The meadow pipit has declined in southern Sweden since the 19th century, when there were significantly more wetlands compared with today. A large proportion of wetlands were ditched and drained to create more arable land. During the late 20th century, many drained mires were planted with forest. The closure of small traditional farms has also resulted in wetlands and fens that were previously used for grazing and haymaking, becoming overgrown.

Yellow wagtail is another bird that breeds on wet meadows. It has also declined as a result of traditional management being abandoned in many places. But the yellow wagtail has found a haven in Komosse, where its numbers have increased.

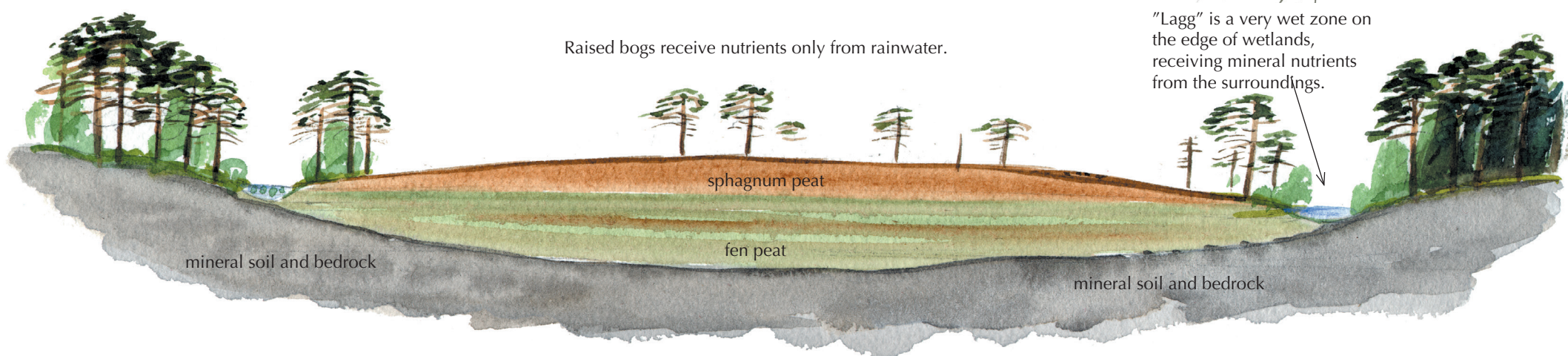
Other species affected by draining, ditching and encroachment include red-throated loon and waders such as wood sandpiper, snipe, curlew and golden plover. These birds breed on the expansive, open spaces on Komosse. Golden plover is common here, and in summer you can hear its melancholic call. In early spring, black grouse cocks lek on the open bog. Capercaillie and coniferous woodland birds such as crested tit, coal tit and willow tit thrive in the forested areas around Komosse.



capercaillie  
*Tetrao urogallus*

black grouse  
*Lyrurus tetrix*

"Lagg" is a very wet zone on the edge of wetlands, receiving mineral nutrients from the surroundings.

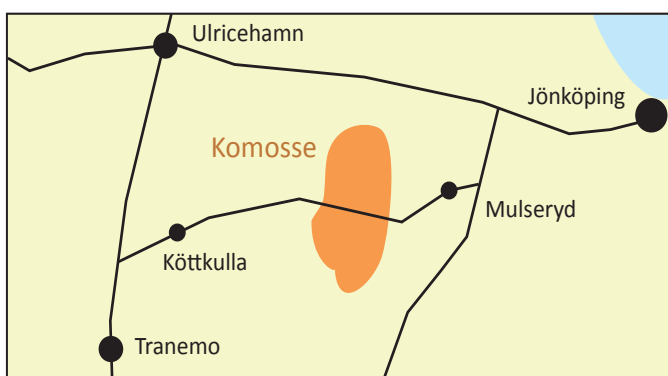


Raised bogs receive nutrients only from rainwater.



common frog  
*Rana temporaria*

## Find your way here!



# Komosse



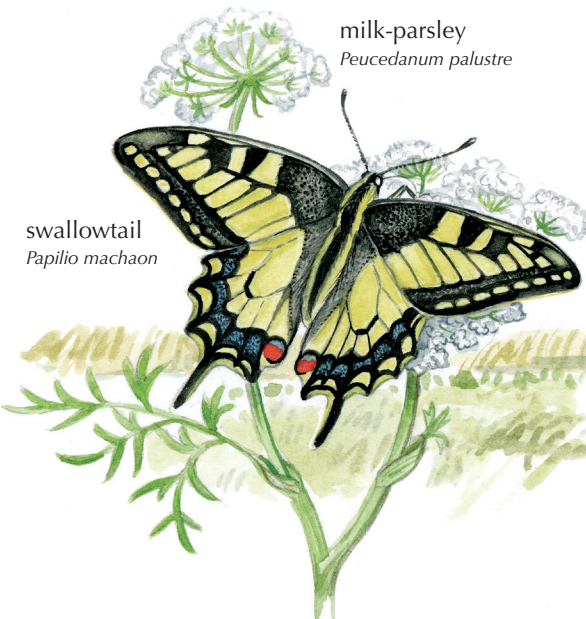
## Other wildlife

Moose finds grazing in the lagg and other fen areas. Other mammals that live on the bog include small rodents, deer, fox and hare. In the wet meadows live small animals such as frogs, toads, adder and grass snake. Here you can also see the beautiful swallowtail, one of the largest and most colourful butterflies in Sweden. The swallowtail lays its eggs on the leaves of milk-parsley, which also constitutes the main food for the larvae. Raft spider, which is Sweden's largest spider, lives by the water in the wet meadows. It does not spin a web, but catches its prey through a quick attack from a water lily or chickweed leaf.

## History of the reserve

In 1949, the Swedish Society for Nature Conservation bought 2 286 hectares of the most interesting and central parts of Komosse. A national campaign among Swedish nature lovers yielded the SEK 40 000 required for the purchase. Today, Komosse Nature Reserve comprises almost 3 000 hectares and is located in both Västra Götaland and Jönköping counties.

The purpose of the nature reserve is to safeguard one of Sweden's most interesting mire areas for scientific conservation and outdoor recreation.



swallowtail  
*Papilio machaon*

milk-parsley  
*Peucedanum palustre*

This leaflet is published in collaboration with the County Administrative Boards in Västra Götaland and Jönköping.



# Welcome to Komosse nature reserve

Komosse comprises a total of 70 km<sup>2</sup> of desolate wilderness including different types of mires, watercourses, forest areas and mineral islands. Komosse is also the largest contiguous mire area in southern Sweden. The mire landscape, located around 350 metres above sea level on the border between Västergötland and Småland, is now protected as a nature reserve. The raised bog, with its slightly domed shape, is one of the biggest in Europe, with a difference of more than 25 meters between the highest and lowest point.

The best way to reach the raised bog is by following Björnöleden, a nature and culture trail, largely on footbridges, with information signs. Experience the stillness and silence, only broken by the sound of some of the birds that live here. At Lilla Björnö with views across Lake Björnsjön, you find a shelter and a fireplace. In the old peat barn at the beginning of the trail there is sometimes firewood, which you are allowed to use. There are also benches along the trail for those who want to rest their legs.

The actual Komosse is located north of the lakes Trehörningen and Elsabosjön. This is the part best known to visitors, thanks to the footbridge trail. But the reserve also contains other raised bogs. To the west you find Björnsjö mossen, Ramnömossen and Huljemossen, and furthest north is Timmerhultamossen. The eastern part of the reserve consists of Slättmossen, which is the largest contiguous mire landscape within the reserve. The southern part is divided by a slightly domed moraine ridge into Bohestramossen to the west and Johansjö mossen to the east.

## Vegetation

Different species of sphagnum moss grow on the nutrient-poor raised bog. Sphagnum is one of the most common components in peat. Bogs are formed by deposits of dead sphagnum, which keeps growing at the top and dies at the bottom. In principle, this means that living mats of moss can be several thousand years old. The mosses that are found on Komosse today could well be the same specimens that became established during the bog's infancy, many millennia ago.

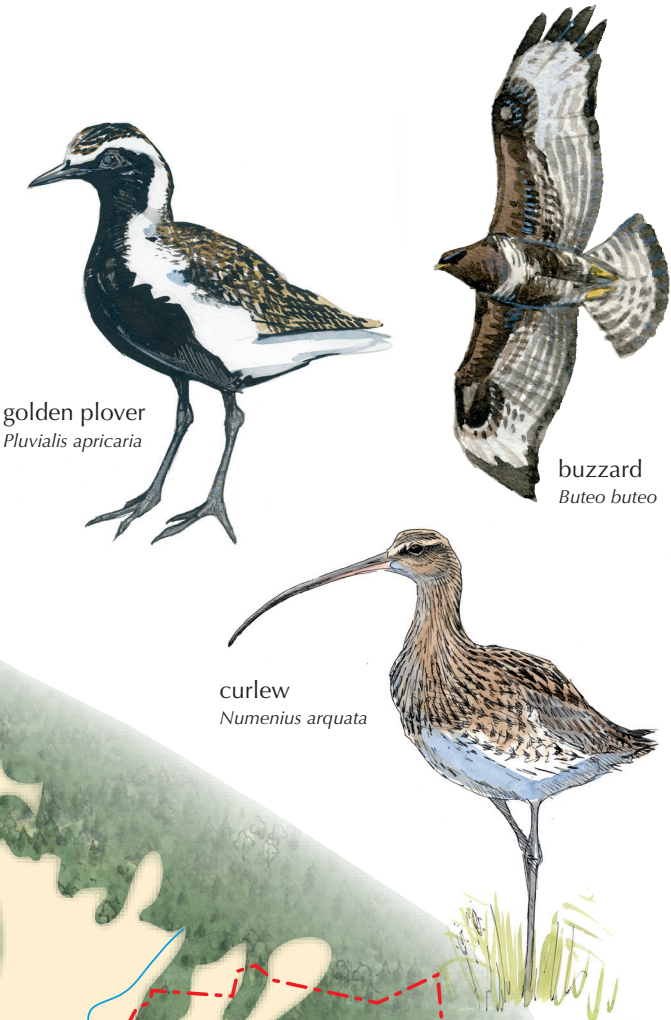
Hare's-tail cottongrass, deergrass, bog rosemary and cranberry grow in the moss mats. On the drier hummocks you find different lichens, as well as heather, cross-leaved heath and crowberry. Between the hummocks are wet areas, so called hollows, where hare's-tail cottongrass, white beak-sedge, common bog-sedge and round-leaved sundew grow. When the water is high, the hollows fill with water. When dry, they may be filled with dark peat sludge, with no vegetation. The hollows form a conspicuous pattern, perpendicular to the slope of the bog. On the pine bogs, which are the most common habitat type in the Komosse area, you can pick cloudbberries, cowberries, bilberries and bog bilberries. In the height of summer, the bright bog asphodel flowers in the lags (very wet zone on the edge of wetlands) and wet meadows (large, shallow pools of water). In some of the lags you can find bog orchid and the orchid *Dactylorhiza sphagnicola*.



## Historical land-use

Maps from the end of the 19th century show that parts of Komosse were used for haymaking. Sedges, horsetails and grasses were cut with scythes. But mire haymaking was phased out as farmers started using artificial fertilizers and growing ley crops. Hay was mainly harvested on marshland and used as winter fodder for the animals.

Peat harvesting also occurred on Komosse. The peat was used as bedding for the livestock. Along the Björnöleden trail is an old peat barn that belonged to Mörkö farm. Here, peat from the now abandoned extraction site nearby was stored. The barn is now used as a rest cabin and woodshed for outdoor recreation.



- Symbols**
- Reserve boundary
  - ~ Streams
  - .... Trails
  - Yellow area: Predominantly mire
  - Shelter icon: Shelter
  - P icon: Parking area
  - Toilet icon: Toilet
  - Bird tower icon: Bird tower
  - Fireplace icon: Fireplace