



Aerial photograph of an aapa mire (A.Torvinen).

AAPA MIRES

Aapa mires are extensive complexes of different mire types. The main reason why aapa mires are primarily found in Lapland and Ostrobothnia are the special climatic conditions in this region. In the north, precipitation is greater than evaporation, with the result that aapa mires remain wet throughout the summer

Fast-moving, high-volume runoff water from the melting snow is a typical feature of spring in the north. Nutrients are carried by the snowmelt into the centre of the aapa mires. This is the only extra source of mineral nutrients for the plants in aapa mires. Other features affecting the development of mires in southern Lapland and northern Ostrobothnia are the proximity of the coast and land uplift, resulting in the mires being relatively young.

Aapa mires are one of the habitat types given priority by the European Union. As the mires in Europe are mainly concentrated in Finland, we have a special responsibility to ensure adequate conservation of this type of habitat.

INFORMATION

The Lapland Regional
Environment Centre
PB 8060, FIN-96101 ROVANIEMI
www.vyh.fi/lap/lap.htm

Forest and Park Service
Natural Heritage Services
PB 8016, FIN-96101 ROVANIEMI
www.metsa.fi/luo/index.htm

Forest and Park Service
Natural Heritage Services
PB 81, FIN-90101 OULU
www.metsa.fi/luo/index.htm

The North Ostrobothnia Regional
Environment Centre
PB 124, FIN-90101 OULU
www.vyh.fi/ppo/ppo.htm

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Aapasoiden suojeleminen Lapissa ja Pohjanmaalla



AAPA MIRES

The World of Birds

THE MIRE AWAKES IN THE SPRING

Owls start their courtship and breeding in the early spring before the migratory bird species arrive. On a skiing trip in the clear nights of March and April you may hear a Tengmalm's owl (*Aegolius funereus*) calling, or a Pygmy owl (*Glaucidium passerinum*) whistling in the spruce-pine swamp. In some years hawk owls (*Surnia ulula*), which often sit calling in the top of an old, dried-out tree, are also rather common. By the time the other species of owl start to lay their eggs, the first migrating birds species arrive in their breeding areas. One of these is the migrating, short-eared owl (*Asio flammeus*), arriving from its wintering grounds in Central Europe.

In April and May thousands of birds arrive from their wintering areas to breed on the northern aapa mires. Ducks have paired off already in their wintering areas. Ruffs (*Philomachus pugnax*) gather in their permanent lekking areas. Many other species of waterbird perform loud, conspicuous displays, especially the cranes (*Grus grus*).



A female short-eared owl (*Asio flammeus*) is keeping its nestlings warm in the sunset (M. Aikioniemi)



A high proportion of the European crane (*Grus grus*) population breeds on the aapa mires (A. Torvinen).

Cranes, whooper swans (*Cygnus cygnus*) and bean geese (*Anser fabalis*) have made their nests, and the first young may have already hatched, by the time the first broad-billed sandpipers (*Limicola falcinellus*) whir down to the flarks.

The "birdlife" of aapa mires is at its liveliest from the end of April up until the middle June, when the autumn migration starts. Female spotted redshanks (*Tringa erythropus*) and curlews (*Numenius aquata*), which leave the males to take care of the fledglings, are the first to start the migration to wintering areas. In contrast, male ducks start to migrate earlier than females, and the females take care of the young. The autumn migration may continue right into late autumn.

SPECIES RICHNESS

More than half of the bird species regularly breeding in Finland breed on mire habitats. The most numerous groups are passerines, waders, gulls and gallinaceous birds. Few in number, but characteristic to mire habitats, are hawks, owls and woodpeckers.

Several features, such as the size, water level and the fragmentation of mires, affect the number of breeding bird species. The diversity of bird species is highest on large flarky mires. The bird density varies from 40–50 up to 110–120 pairs per square kilometre.

The proportion of passerines can be as high as 80%. The most common species are the willow warbler (*Phylloscopus trochilus*), the meadow pipit (*Anthus pratensis*), the yellow wagtail (*Montacilla flava*), the tree pipit (*Anthus trivialis*), chaffinch (*Fringilla coeleps*), brambling (*Fringilla montifringilla*), and the spotted flycatcher (*Muscicapa striata*).

The most abundant waterbirds are teal (*Anas crecca*), mallard (*Anas platyrhynchos*), wigeon (*Anas penelope*), pintail (*Anas acuta*), the common goldeneye (*Bucephala clangula*), the tufted duck (*Aythya fuligula*) and, in some areas, the bean goose.

Waders are a group of birds that is very typical to wet mires. The wood sandpiper (*Tringa glareola*), the common snipe (*Gallinago gallinago*), ruff, curlew, whimbrel (*Numenius phaeopus*), broad-billed sandpiper and lapwing (*Vanellus vanellus*) are the most common wader species.



One of the most common bird species on aapa mires is the yellow wagtail (*Montacilla flava*) (M. Aikioniemi).

A REFUGE FOR THREATENED AND DECLINING SPECIES



The golden plover (*Vanellus vanellus*) spread to open mires in the 1950's. Its population density is currently on the decrease (M. Aikioniemi).

CHANGES IN THE POPULATION DENSITIES

The population densities of many species of bird have fluctuated rather rapidly during the past few decades. The black-headed gull (*Larus ridibundus*) spread to the aapa mires of northern Finland only a few decades ago. However, the peak in the population was soon followed by a decline, and in many areas it paid only a relatively short visit. Nowadays the black-headed gull is a threatened species.

In recent years, the little gull (*Larus minutus*) population has increased as fast as the black-headed gull did earlier. This lively, noisy species usually breeds together with black-headed gulls in mixed communities.

The herring gull (*Larus argentatus*) has been breeding in open mires for more than a century already. In the beginning of the 20th century the breeding population of the herring gull was very small. The herring gull population started to grow in the 1930's. Most of the herring gulls nowadays breeds on mires. The largest herring gull communities may have as many as a hundred breeding pairs.

The principle aims of mire conservation are the protection of mire species and landscape. 31 species of bird, whose protection presupposes special actions according to the Bird directive of the EU, breed regularly in Lapland and Northern Ostrobothnia. Many of these special species, e.g. the whooper swan, hazelhen (*Bonasa bonasia*), capercaillie (*Tetrao urogallus*), crane, the golden plover (*Pluvialis apricaria*), the wood sandpiper (*Tringa glareola*), the common tern (*Sterna hirundo*), the Arctic tern (*Sterna paradisaea*) and the three-toed woodpecker (*Picoides tridactylus*), are still delightfully abundant and common on the mires of the north.

The small-numbered species characteristic of mires include the golden eagle (*Aquila chrysaetos*), the white-tailed eagle (*Haliaeetus albicilla*), the osprey (*Pandion haliaetus*) and the peregrine (*Falco peregrinus*). Eagles breed in the trees in pine and spruce mires along the edges of the aapa. In contrast, the peregrine prefers to breed on wet flark bogs.



One of the most typical species on aapa mires is the swan (*Cygnus cygnus*), which is also the national bird of Finland (A. Torvinen).



The ruff (*Philomachus pugnax*) is declining in Europe, but it is still abundant in the north (M. Aikioniemi).

The pine and spruce mires along the edges of the aapa mires are habitats favoured by gallinaceous birds. In the winter capercaillies gather to eat pine needles, and black grouse (*Tetrao tetrix*) feed on birch seeds in the edge forests. In the spring, open mires are important lekking areas for black grouse.

Willow grouse (*Lagopus lagopus*) live all the year round in the dwarf birch stands alongside brooks and on the mire. The plumage of willow grouse is mottled brown in summer and pure white in winter, thus enabling it to merge into the background and affording protection against predators.

The abundance of all Finnish grouse species has declined during last years. The most predictable reason for degression of population densities has been the man made changes in living habitats of grouses. Wide open mires with forest clumps and pine and spruce mires along the edges of aapa mires offer diverse habitat for grouses. In addition, wide and continuous areas are needed to guarantee that a sufficient number of individual birds will gather to lek in the spring.

TWO REPRESENTATIVE AAPAMIRES

Martimonaapa-Lumiaapa-Penikat is one of the most important mire areas in Finland, is located in southern Lapland. Bird-watching towers, which are easily reached from the road running past the south-east corner of the area, provide excellent vantage points to see the birds of the area. A breath-taking landscape can also be seen from the lookout tower of Keski-Penikat.

Currently there are 95 breeding species in the area. The most common passerines are the willow warbler, the meadow pipit, the tree pipit and the yellow wagtail. In the forests you may see the Siberian jay (*Perisoreus infaustus*) and the rustic bunting (*Emberiza rustica*). The two-barred crossbill (*Loxia leucoptera*) has also been sighted in some years.

The species representative of the open aapa mire are waterbirds, waders and gulls. The most interesting waterbirds are the 20 pairs of red-throated divers (*Gavia stellata*), and the 30 pairs of bean geese.



Bean geese (*Anser fabalis*) on an aapa mire in early spring (M. Aikioniemi).



The diverse group of waders is represented by the wood sandpiper, ruff, the common snipe and the curlew. The broad-billed sandpiper, the red-necked phalarope and the jack snipe (*Lymnocyptes minimus*) are strongly represented in the area, even though they are quite rare elsewhere. The strange courting call of the jack snipe sounds like the drumming hooves of a galloping horse, and can be heard at dusk at the end of May and early June. Gallinaceous birds are also common in the area, but their population densities vary considerably from year to year.

More than 10 species of bird of prey can be seen at Martimonaapa-Lumiaapa-Penikat, most of them breeding in the area. The honey buzzard (*Pernis apivorus*), the hen harrier (*Circus cyaneus*) and the merlin (*Falco columbarius*) are typical birds of prey in the area.

Hirvisuo is one of the best bird mires in the northern Ostrobothnia area. 41 bird species typical of mire habitats breed in the area, and a large number of other species, mainly forest birds, can also be seen. The total number of breeding pairs is more than 3 000.

The breeding population of waders, for example, consist of tens of broad-billed sandpipers and spotted redshanks, and a few pairs of red-necked phalaropes and jack snipes. The black-throated diver (*Gavia arctica*), the whooper swan, the bean goose and the common scoter (*Melanitta nigra*) represent the waterbirds. About twenty pairs of cranes breed on the pine mires in Hirvisuo, and there is a herring gull community (*Larus argentatus*) in the middle of the aapa mire.

A tower and wooden walkways have been constructed for bird watchers close to the Oulu-Kuusamo road. From the bird-watching tower, an alert watcher may see a hobby (*Falco subbuteo*) catching wasps or a common buzzard (*Buteo buteo*) looking for voles. Spotted redshanks, ruffs, golden plovers and wood sandpipers can be seen on the nearby flarks, especially in spring.



The spotted redshank (*Tringa erythropus*) is a typical species of flarky aapa mires (M. Aikioniemi).