



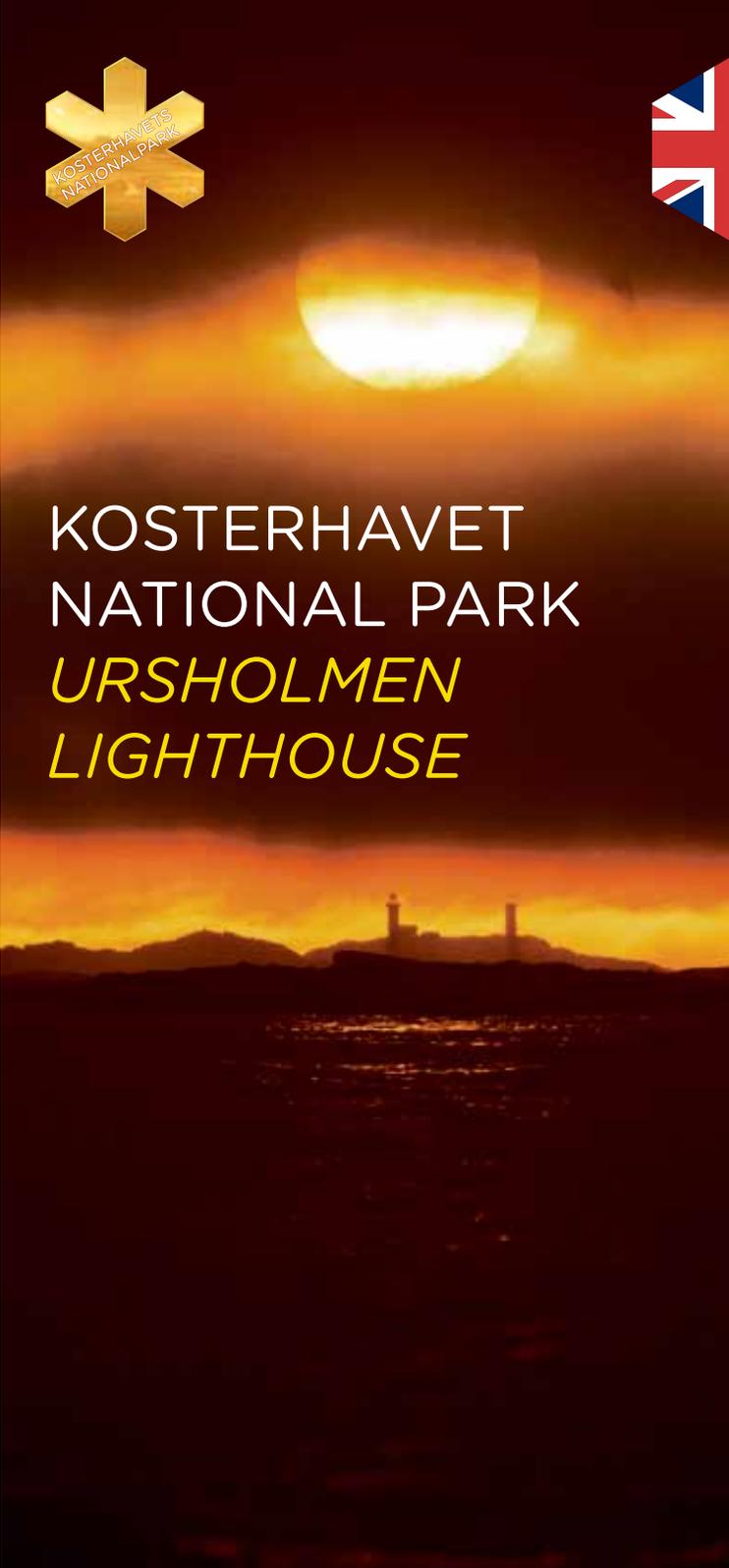
NATIONAL PARKS OF SWEDEN



1. ABISKO – An easily accessible mountain valley with unusually rich flora.
2. STORA SJÖFALLET / STUOR MUORKKE – Impressive peaks, glaciers and ancient pine woodlands.
3. SAREK – Magnificent, demanding wilderness in a unique mountainous landscape.
4. PIELJEKAISE – Expansive, pristine woodlands of mountain birch.
5. SONFJÄLLET – A low mountain with natural woodland and plenty of bears.
6. HAMRA – A rare complex of natural woodland, wetland and watercourses.
7. ÄNGSÖ – Genuine agricultural landscape with grazing animals and haymaking.
8. GARPHYTTAN – Old agricultural landscape that is a sanctuary for the dormouse and spotted nutcracker.
9. GOTSKA SANDÖN – Unique, beautiful island with miles of sandy beaches.
10. DALBY SÖDESKOG – Leafy woodland on the plains of Skåne.

11. VADVETJÄKKA – Sweden's northernmost national park is a mountain with deep caves.
12. BLÅ JUNGFRUN – An island of legends, with smooth rocks, deciduous trees and beautiful views.
13. NORRA KVILL – One of the few old growth type woodlands in southern Sweden.
14. TÖFSINGDALEN – Valley with ancient pine woodlands, rich in boulders and rushing waters.
15. MUDDUS / MUTTOS – The land of vast wetlands and old growth woodlands.
16. PADJELANTA / BADJELÄNDA – Rolling mountain heaths and big lakes, far from the nearest road.
17. STORE MOSSE – The largest wetland area in Sweden south of Lapland.
18. TIVEDEN – A wooded landscape with a sense of wilderness.
19. SKULESKOGEN – Coast with magnificent views and the world's highest isostatic lift.
20. STENSHUVUD – Coastal hills, broadleaved woodlands, inviting heathlands and beaches.
21. BJÖRNLANDET – Mountains, cliffs and woodlands with traces of old woodland fires.
22. DJURÖ – Archipelago in western Europe's biggest inland sea.
23. TYRESTA – Pristine woodland just south of Stockholm.
24. HAPARANDA SKÄRGÅRD – Archipelago with sandy beaches and shallow waters.
25. TRESTICKLAN – Roadless wilderness with expansive views from pine-covered ridges.
26. FÄRNEBOFJÄRDEN – A mosaic of broadleaved woodlands and water in Nedre Dalälven.
27. SÖDERÅSEN – Deciduous woodland, scree slopes, running water and a rich flora and fauna.
28. FULUFJÄLLET – By Sweden's highest waterfall, old growth woodland meets mountainside that is white with lichen.
29. KOSTERHAVET – Species-rich area of sea and archipelago with Sweden's only coral reef.

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Responsible for Sweden's national parks.



KOSTERHAVET NATIONAL PARK *URSHOLMEN LIGHTHOUSE*



Kjell Holmmer/Lightvision

THE WESTERN OUTPOST

The seas around Koster are full of treacherous shallow reefs. Many ships have perished on these rocks. To warn sailors of these hazards, a lighthouse station was opened on Ursholmen on 13th November 1891. Three families came to live on the island to maintain the lights. Today the station is unmanned, but the houses and sheds remain, and the twin towers are an unmistakable silhouette in Kosterhavet.

EARTHQUAKES AND CONTINENTAL COLLISIONS

On October 23rd 1904 Ursholmen was struck by Sweden's strongest earthquake in modern times. The lighthouses were shaken, but undamaged. The quake came from deep in the seafloor just to the west, but was felt even in Stockholm.

During its geological history Ursholmen has been subjected to powerful forces. Much of the bedrock formed from ancient seabed, as layers of sand and clay were pressed together over millennia. About 1600 million years ago, what is now Sweden collided with another continent. The resulting extreme pressures and temperatures caused the rocks to melt and transform into grey gneiss, which today forms the bedrock in much of the Koster archipelago.

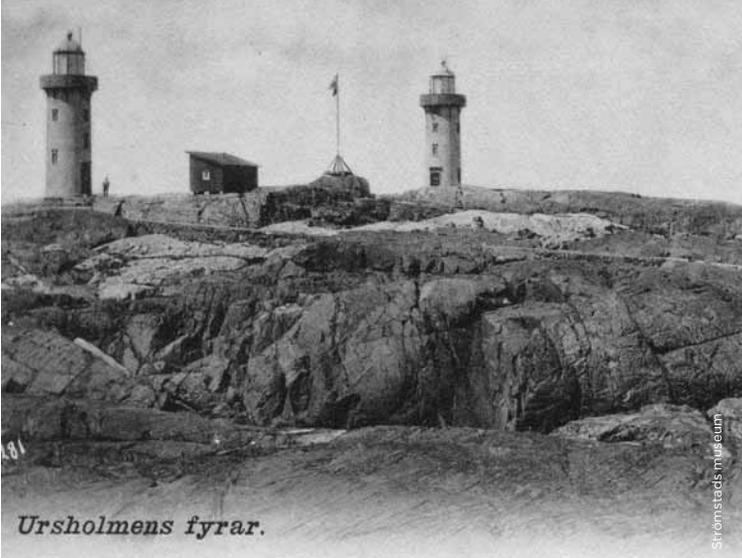
"Roads" of black diabase appear to run across the rocks. They were formed when the bedrock contracted and cracked. Molten rock was pushed up into these cracks and cooled quickly to form diabase.

Boulder fields remind us of the ice-age and the rising of the land-masses that began as the ice melted, and which continues today. The boulders, many from around Oslo and even from the province of Dalarna, were brought here by the ice.



Boulder from Dalarna?

Kjell Holmmer/Lightvision



Strömsteds museum

THE STORY OF A LIGHTHOUSE

Until just over 50 years ago, three families lived and worked here on the island. The lamps had to be lit and extinguished every day, year-round, in pouring rain and blizzards.

It all began on North Koster, where Bohuslän's most northerly lighthouse station was built in 1849 with twin towers and lighthouse-keepers cottages. But the beacons were so high up that they were sometimes mistaken for stars, and in bad weather could be hidden by clouds. So a more suitable location was sought.

Yttre Ursholmen was chosen, farthest to the west. Here was land for houses, fresh water, and a sheltered harbour. One of the lamps for the new lighthouses was taken from North Koster, the other from Vinga. One of the houses was also moved, for the first and second assistant lighthouse keepers. The Head lighthouse keeper had the right to his own house, which was built specially for him.

A lighthouse keepers' life was very different to that of today's visitors. They had to work diligently, night and day. At night there were two shifts: sunset to midnight, and midnight to sunrise. The lamps couldn't be allowed to go out, and during the darker winter months they'd shine 24 hours a day. By day the lenses and windows had to be cleaned, kerosene supplies refilled, and readings from the small weather station recorded four times per day. Then, as now, the exposed location required constant maintenance of the lighthouses and buildings.

The small garden provided potatoes and vegetables - fertile soil was brought from Koster. Chickens, pigs and sheep, and at one time even a cow were also kept here. Fishing and hunting helped fill the pantry, and the autumn lobster catches brought welcome extra income. Seals provided skins, oil, and a bounty.

In the summer of 1965 the lighthouse was converted to electricity. As daily maintenance was no longer needed the lighthouse keepers left. The 70 year history of a living lighthouse station was at an end.

"The Master Light Keeper is charged with maintaining due order and obedience among employees and with ensuring sober and proper conduct at all times, such that the aforesaid employees thereby fulfill with care and certainty the obligations of their employment."

From Lighthouse Authority regulations.



Strömsteds museum

NATURE ABOVE AND BELOW THE SURFACE

Poor soil, salt spray, and strong winds. For most plants, Ursholmen is an inhospitable place. Yet below the sea-surface rich beds of eelgrass and seaweed grow in the salty water.

'Bredgrundén' in the west is home to one of Sweden's richest kelp forests. Here the brown alga, *Laminaria hyperborea*, grows to over half a meter high. Cod and cuckoo wrasse swim among the kelp, and crabs and lobsters thrive on the rocky seafloor.

There's an eelgrass bed in the southern end of the narrow sound between Inre and Yttre Ursholmen. This is a great place to snorkel and look for small fish such as sticklebacks and goldsinny. Hermit crabs, shrimp, and shore crabs crawl on the sandy bottom, and seaweeds like bladder-wrack, toothed-wrack and knotted-wrack cover the rocky shores.

Harbour seals are common in these waters. They often haul out on the rocks to sunbathe and can sometimes be seen swimming in the harbour. During the summer many small birds such as wheatear and linnet make the island their home. Rock pipits can be heard singing as they fly over the rocks. Autumn storms can bring in oceanic birds such as gannets and fulmar.

On the bare rocks there's very little soil, but sunny crevices provide protection where wild pansies, stonecrop and scurvygrass can flower. Hedges of blackthorn grow beside the paths, and are covered with small white fragrant flowers in spring and blue-black berries in autumn.



HARBOUR SEAL
Phoca vitulina



Elisabeth Lumeryd

THRIFT
Armeria maritima



Barnacles are small crustaceans that cement themselves to rocks near the water's edge. Be careful - their white shells are sharp!

Lars-Ove Loo



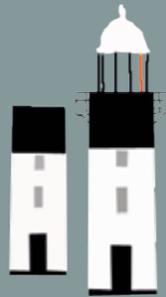
THE ROCK POOL
There's a natural swimming pool hidden in the black diabase. Waves replace the water from time to time, and mussels and seaweed line the bottom. Beware! - the rocks can be very slippery.



ISLAND CHILDREN
If there were more than three school-age children, a teacher would visit for a few months each year. At one time, there were 12 children in school here. Birgit Hermansson was 7 years old when her father became lighthouse keeper.



A PLACE TO LIVE
Houses and sheds surround the central yard. Close to the food cellar you can still see the Head lighthouse keeper's garden, surrounded by a little red fence. This photo was taken before the "East House" was built in 1938.



TWIN TOWERS
To distinguish Ursholmen from other lighthouses, two towers were built. By the 1930's techniques to produce characteristic flashing patterns had developed, and the northern light was closed. This saved labour and fuel. You can find out more about the lighthouses in the little museum - ask for the key in one of the houses.

VITAMIN PILLS
The fleshy leaves of scurvy grass are rich in vitamin C. Sailors used to pick and eat them to reduce the risk of scurvy, which was a common and lethal disease on long voyages at sea with a poorly balanced diet.



QUARRY
At the end of the 1800's stone-masons came to quarry the black diabase. Polished diabase is a beautiful ornamental stone often used for gravestones, but the stone from Ursholmen was too brittle. The quarry was abandoned after only a few years.



EEL GRASS BED
There's much to discover in this submerged eelgrass meadow. Be careful not to snorkel alone, or if you do, ask someone on land to keep an eye on you!



KELP FOREST
Swaying forests of the kelp, *Laminaria hyperborea*, grow on the sea floor.

LIGHTHOUSE MUSEUM

YTTRE URSHOLMEN

INRE URSHOLMEN



EUROPEAN SHAG
Phalacrocorax aristotelis

LIGHTHOUSE FACTS

- Tower height: 13 m
- Height of light (above sea level): 33 m
- Range: about 10 nautical miles (18 km)

The lighthouses on Ursholmen were the first in Sweden to be built in concrete. They were powered by kerosene up until electrification in 1965. In 2000 the electricity cable was replaced by solar panels, and the power of the light greatly reduced.

A PART OF THE NATIONAL PARK

Ursholmen is part of the Kosterhavet National Park. From the lighthouse there's a magnificent view over much of the park. Established in 2009, Kosterhavet is Sweden's first national park to protect primarily marine habitats. The islands and buildings are owned by the Swedish Environmental Protection Agency and managed by the Kosterhavet Administration.

REMEMBER

Ursholmen is a place where you can still experience the forces of nature. Help to preserve the special atmosphere, and to leave the islands in the condition that you would like to find them.

- You may bring your dog, but it must always be on the leash.
- You may not move, or remove, stones in the boulder-fields.
- You may stay here in your own boat but for no more than 2 consecutive days.
- You are not allowed to idle a boat engine, or use a motorised generator.
- Between 15th May and 15th August there is a 5 knot speed restriction throughout most of the national park, including around Ursholmen.
- It is forbidden to go within 100 m of seal- and bird-sanctuaries.

Complete rules for the National Park are available on the Kosterhavet information board on the pier on Yttre Ursholmen, and at www.kosterhavet.se

LEGEND

- DRINKING WATER
- DRY TOILET
- NATURAL HARBOUR
- WASTE BINS

CONTACT / GETTING HERE

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You can reach Ursholmen by private boat or water taxi. Boat excursions often call at Ursholmen in summer.