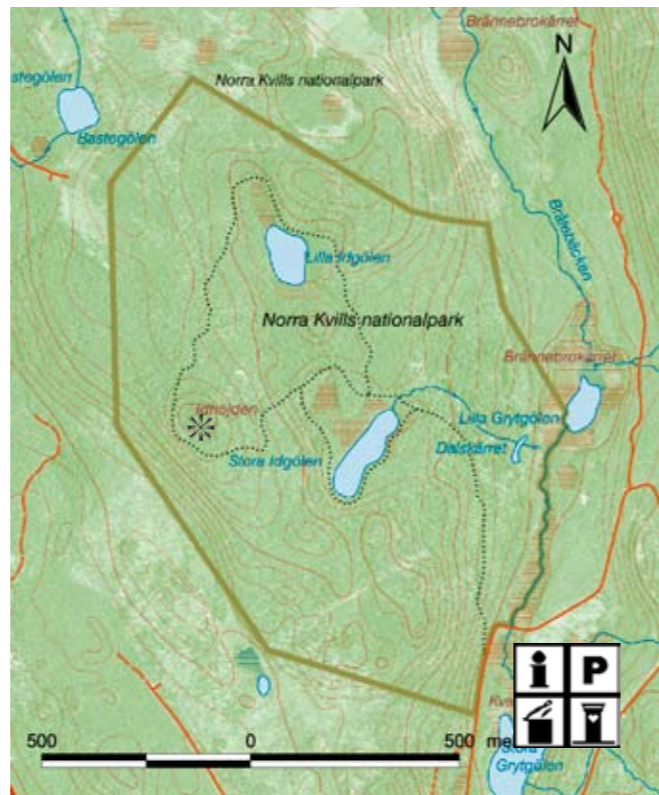


Visiting the Norra Kvill National Park

The National Park is about 19 km northwest of Vimmerby, near the Vimmerby-Norra Vi road. There is a signposted road running northeast 7 km south of Ydrefors. Follow it for 2 km and you come to a car park at Stora Grytgölen. From here a hiking trail (not disabled-accessible) leads into the park. At the car park you will also find an information board, a toilet, tables and benches.



Maps security-cleared for publication.
Lantmäteriverket 19th May 2006.



Things to remember in the National Park

- You must not damage the vegetation. This includes dead trees, and you are not allowed to break off twigs or pick or dig up plants.
- The fauna are protected and, accordingly, must not be disturbed. For example, you may not collect insects or other animals.
- Dogs must be kept on the lead.
- Hunting and fishing are not allowed.
- Camping and the lighting of fires are prohibited.

Complete visitor regulations are posted at the national park, or can be found at the Swedish Environmental Protection Agency's homepage www.naturvardsverket.se



Creeping lady's tresses (Goodyera repens) is a typical Norra Kvill species.

The purpose of Sweden's National Parks is to preserve large areas in their natural state for research and outdoor recreation. The areas are to be made accessible to the general public without their original character being lost.

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Länsstyrelsen
Kalmar län

KALMAR COUNTY NATIONAL PARK



Norra Kvill





Norra Kvill – a south Swedish primitive conifer forest

Fallen trees, huge moss-grown boulders and magical tarns combine to give Norra (North) Kvill the character of a primeval forest. This well-preserved ancient forest on the Småland Plateau is in fact a rarity of its kind.

The Småland Plateau is gently undulating hilly and mountainous country, and Norra Kvill comprises one of its mountains. The ridge slopes steeply down towards one of Norra Kvill's two lakes – Stora Idgölen. Covered in water lilies, this tarn has also been called Trollsjön and is for all the world like a winking eye in the midst of the National Park.

The highest point of the mountain, Idhöjden, is 45 metres above the lake level but 230 metres asl. The view from here is magnificent. Lilla Idgölen lies northeast of the height, in the part of the National Park where traces of the old forestry are still visible.

The bedrock is Småland granite, the overburden is crushed bedrock. The numerous boulders are a striking feature, in some places forming continuous boulder fields. The steep undulations in the terrain are due to fault fissures.

Old pines and giant spruces

The south of Sweden is pre-eminently an agrarian landscape. None of its forests is completely untouched, but at Norra Kvill no trees have been felled for 150 years now, with the result that the forest is steadily reverting to its primeval state. Some 80 per cent of the trees in the National Park are pine trees, many of them more than 350 years old. The pine migrated to southern Sweden 8 or 9,000 years ago, following the retreat of the last ice cap.

The spruce prefers the moister declivities and is usually younger than the pine but bigger. There are giant specimens here, 35 metres tall and 2.5 metres in circumference. Often they shelter burgeoning growths of moss, both on the boulders and on the ground itself. Spruce forest with blueberry shrubs is found more often in the moister, more low-lying parts. The stream ravine in the southeastern part of the National Park is a lush habitat with broadleaf trees like the elm, lime and oak and shrubs like bird cherry (Maybush), hazel, raspberry and Guelder rose.

Fire – the forest's own rejuvenation method

Fire used to be the forest's normal method of rejuvenation. The forest in the National Park has been shaped by innumerable fires over the centuries, both spontaneous and anthropogenic. More than a hundred years have now passed since Norra Kvill last caught fire. The small area in the northwest which burned down on that occasion now sports hundred-year-old self-sown pine trees. Many pine trees elsewhere in the forest show traces of forest fires that ranged long ago. The traces – scorch damage to the cambium layer – are often visible at the foot of the trunk, where the damage has been encapsulated by the bark. In the western part of the



Centuries-old pine with scorch damage from a total of eight forest fires.

National Park there are pine stumps showing traces of up to six forest fires.

The pine, with its thick bark, is almost made for coping with forest fires. Now that large areas of the National Park have not been burned for a long time, the pine is increasingly hard put to it holding its own against the spruce. The latter rejuvenates more easily than the pine, because spruce trees stand close together, making it hard for the light to reach the ground. Eventually, then, the proportion of spruce in the forest will increase at the expense of the pine, unless new fires break out.

From woodpeckers and beetle to enchanter's nightshade and violets

The fauna is typical of this kind of conifer habitat. Elk, roe deer and hare live here, and the marten has also been sighted. The common goldeneye and mallard sometimes appear on the lakes. The commonest woodland birds are the chaffinch, goldcrest and robin. Other bird species occurring include the pygmy owl, black woodpecker and tree creeper. The insect fauna is remarkably copious, added to which it reflects the gradual and unrelenting transition of Norra Kvill from fire-damaged pine forest to untouched spruce forest. It includes, for example, the stag beetle *Ceruchus chrysomelinus*, which thrives in old, untouched conifer forest, and *Nothorhina punctata*, which inhabits the bark of thick, sun-exposed pine trees.

The flora is astonishingly varied for a conifer habitat. Over 200 mosses, 100 lichens and more than 200 superior plant species have been identified. More demanding



Ceruchus chrysomelinus



Pulsatilla vernalis, an anemone favoured by forest fires.

species such as spring pea, liverleaf (hepatica), early dog violet and *viola mirabilis* can occur in among the spruce stocks. Characteristic species here are serrated wintergreen and creeping lady's tresses. The waterlogged woodland northwest of Stora Idgölen has bog arum, tufted loosestrife and marsh violet, among other species, as well as such northern plants as *Stellaria longifolia* and ryegrass sedge. Leaves of water lily and broad-leaved pondweed spread out over the surface of the water. The rare grass species wood fescue and Alpine enchanter's nightshade grow in the stream ravine. The rare *Pulsatilla vernalis* anemone grows in the inhospitable pine forest on the high ground, where the ground vegetation is otherwise dominated by heather and bearberry.

Primitive forest matters

Primitive forest is a greatly variable habitat, with trees of all ages standing side by side and with plenty of dead wood at various stages of decomposition. Above all, a forest which has been allowed to develop freely without human interference accommodates a greater wealth of fauna than forests dedicated to timber production. Many species are adapted to an untouched environment and are growing less and less common as primitive forests become fewer and further between. This applies, for example, to insects living in the wood of trees and birds nesting in holes in trees. The primitive forest is also of scientific interest. In it we can study how different trees reproduce, compete with and succeed one another in a natural context. In the south of Sweden today, only fragments of primitive forest remain.