

THE GEOLOGY OF HANHIKIVI

HANHIKIVI SHALE ZONE

■ **The bedrock** of the Hanhikivi cape is composed of independent shale zone, about 5 km² wide Hanhikivi conglomerate. Comparatively bold conglomerate occurrence is mostly forcefully shaled and includes mainly volcanic and subvolcanic sphericals. The shale zone continues under the sea and on the landside of the cape it confines to gabbrodiorite. Explore the deposit on the cape's vast shore rocks!



NATIONALLY VALUABLE ROCKY AREA

■ **The Hanhikivi cape** includes 218,8 hectares of wide rocky area, which is nationally valuable for nature and landscape conservation. The rocky area is geologically very remarkable and the value of scenery is remarkable.

Giant's rock!

■ **In the middle** of the shore forest stands the 6 meters high giant, Hanhikivi - "Gooserock". In the days of yore people imagined that nothing but a goblin, a devil or an ogre could have carried that kind of a stone to the place.

Now we know more about the erratic boulders. During the ice age, plateau glacier could move with it parts of rocks, sometimes even a long way, leaving permanent memories in nature - memories from the age when land was covered by ice.



Photo by archives of Pro Hanhikivi

THE DELIMITER OF THE TREATY OF NÖTEBORG

■ **The Treaty of Nöteborg**, 1323, also known as the Treaty of Oreshek, is the peace treaty that set the first eastern border of Finland. The treaty was the first settlement between Sweden and Novgorod Republic regulating their border. The border began at Rajajoki going to the northwest across the Karelian Isthmus and ending on the coast of the Bothnian Bay. Hanhikivi is considered to be the delimiter of the Treaty of Nöteborg.

Hanhikivi is a fixed relic, the delimiter from a historical age and a nationally valuable object protected by antiquities act.

■ **According to an old story**, centuries ago, when the shoreline located more to the east, geese used to rest on the big erratic boulder during their migration. Consequently the stone got the name Hanhikivi - Gooserock.

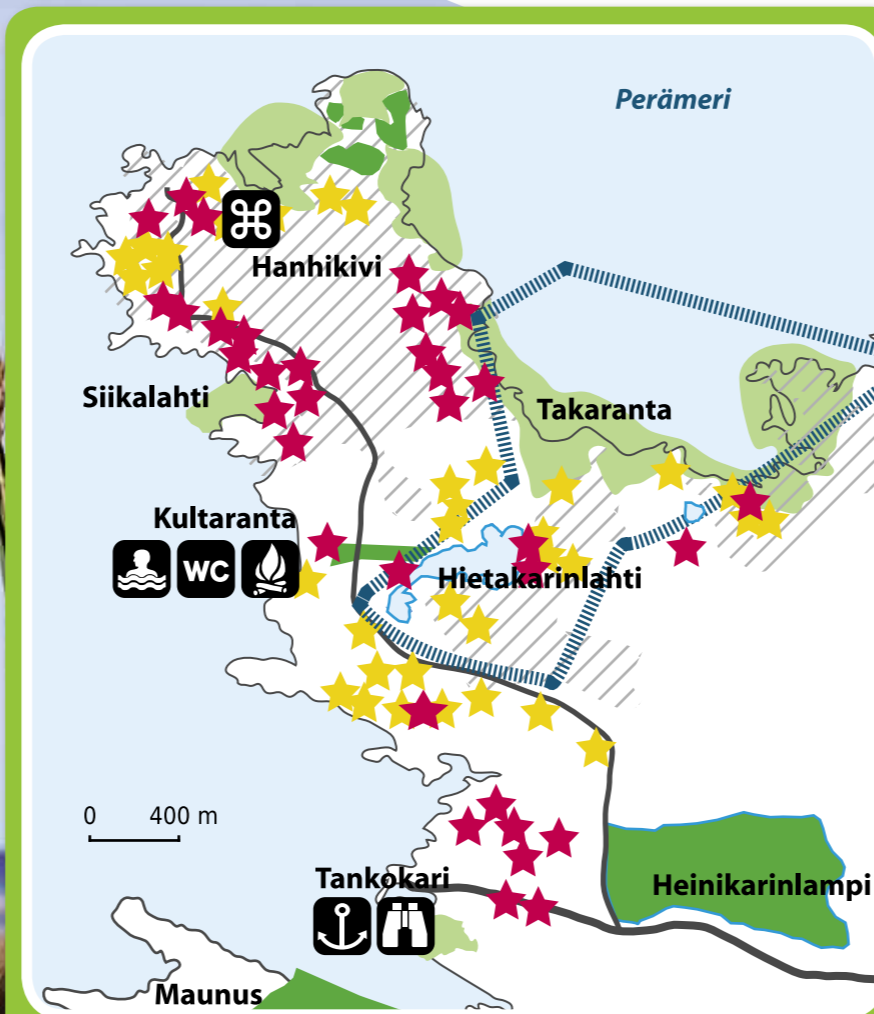
The land has lifted up, the scenery has changed and generations have gone by, but the stone is still there. The photo has been taken in the early 1900's.

Photos by Heidi Kauppila, if not otherwise indicated. The list of the sources can be read: www.hanhikivi.net



Hanhikivi is a cape which is located in the Finnish municipality of Pyhäjoki, on the coast of the Bothnian Bay. The cape is about 500 hectares wide and full of natural treasures.

The natural habitat types of the land uplift coast and the variety of bird and plant species make Hanhikivi a particularly important biodiversity area.



THE HANHIKIVI CAPE

- Parhalahti-Syöläniemi-Heinikarinniemi -Natura2000 -area, the private nature reserves
- The natural habitat types of the Nature Conservation Act
- Glo lakes: Hietakarinniemi, Rovastinperukka, Heinikarinniemi
- ★ Forest Act 10 § conservation subjects
- ★ METSO -environmental subsidy subjects
- ▨ Nationally valuable rocky area
- ▨▨▨ Hietakarinniemi-Takaranta -FINIBA-area. FINIBA areas are remarkable areas for nature conservation. They are nesting and gathering places for threatened and near threatened species and species of international special responsibility.
- Sight: Hanhikivi, the fixed relic
- Swimming place
- WC (dry toilet)
- Campfireplace
- Fishing harbour
- Bird tower

Publisher: Pro Hanhikivi ry • www.prohanhikivi.net
The association has got the Finnish Nature Conservation Foundation's Baltic Sea -stibend to publish this brochure.

WWW.HANHIKIVI.NET



IN ENGLISH



HANHIKIVI

Where the Land Beats the Sea

The sources of the map: The final report of METSO - Merestä Metsäksi -project (Forest Biodiversity Programme for Southern Finland) and the FINIBA-map of the Hietakarinniemi-Takaranta -area in www.birdlife.fi -site.



Kuva: Harri Jaavetti

The Hanhikivi cape
Natural habitat types of a land uplift coast
Birdlife • More than 250 plant species • Geology

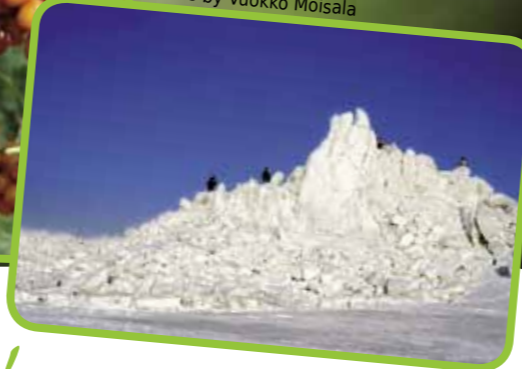
DID YOU KNOW?

■ Around the Hanhikivi cape there are remarkable spawning and rearing areas of Valaam Whitefish, Vendace and Baltic Herring. Near to the point of the cape there is also a spawning area of the critically endangered Grey Mullet, which is on the verge of extinction.

■ **Sea Buckthorn** is a typical pioneer plant of a land uplift coast which has conformed to occupy the shore's bare land promptly. Sea buckthorn grows wild in Hanhikivi.



Photos by Vuokko Moisala



■ **In Bothnian Bay's winter can be seen impressive ice ridges** which can grow to be even ten meters high.

Nationally VALUABLE BIRD AREA

The Hanhikivi cape locates alongside the main bird migration route and thus the numbers of migratory birds are extraordinarily high. The number of many bird species is - as far as known - even greater than anywhere else in Finland. Especially numerous species are, for example, many wader species, Bean Goose, Greylag Goose, Common Crane, many raptor species and Whooper Swan, whose number has been counted to be more than 10 000 during the spring and more than 15 000 individuals during the autumn.

MORE THAN 200 OBSERVED BIRD SPECIES

Many curiosities have been counted in the area, for example Surf Scoter, American Wigeon, Green-winged Teal, Ruddy Shelduck, Grey Phalarope, Olive-backed Pipit and Hume's Leaf Warbler.

Tankokari bird tower, on the southern edge of the Hanhikivi cape, is one of the best known bird watching places in northern Ostrobothnia. It has succeeded annually in the bird watching competition of Birdlife Finland.

TAKARANTA BIRD AREA

The northern coast of the Hanhikivi cape, Takaranta, is a nationally valuable gathering and eating place for waterfowl and shorebirds. The aggregates of waterbirds are at best 3000-4000 in spring and 1000-2000 individuals in autumn.

The most numerous species are Mallard, Common Teal, Eurasian Wigeon, Pintail, Tufted Duck and Goldeneye. The concourse of Swans has been 300 in spring and 500 individuals in autumn, while that of waders has been at best more than 2000 individuals.

In summer Greylag Gooses with their fledglings appear in Takaranta and stay there during the molting - in the recent years more than 200 simultaneously.

OVER 100 BREEDING BIRD SPECIES

A very diverse birdlife with almost 20 threatened species breed in the Hanhikivi cape and its surroundings. Flood meadows, skerries and wetland serve as a nesting place for a myriad of waterfowl and shorebirds. Valuable bird fauna, for example many owl and raptor species and an unusually concentrated population of Lesser Spotted Woodpecker, also lives in the forests of Hanhikivi.

Photos by Harri Taavetti



SPECIAL BREEDING BIRD SPECIES

Species breeding in Hanhikivi cape or its close proximity:

■ Endangered species

Black-tailed Godwit, Ruff and Little Tern

■ Vulnerable species

Garganey, Pintail, Turnstone, Grey-headed Yellow Wagtail, Northern Wheatear, Temminck's Stint, Honey Buzzard, Slavonian Grebe, Shelduck, "Baltic" Lesser Black-backed Gull, Hen Harrier, Tufted Duck and Red-necked Phalarope.

■ **In addition**, one threatened bird of prey, which is kept confidential due to its sensitivity, nests in Hanhikivi area.

■ **Species listed in Annex I** of the EU's Birds Directive: 21 bird species nest or have a territory regularly, 6 bird species temporarily, i.e. Tengmalm's Owl, Eagle owl, Bittern, Common Crane, Little Gull, Marsh Harrier, Hen Harrier, Short-eared Owl and Smew.

■ Hanhikivi is assessed to be, in its present form, one of the most probable places along the Bothnian Bay where the **endangered White-backed Woodpecker** could nest. White-backed Woodpeckers are observed in the area regularly.

■ **The critically endangered Southern Dunlin** has often observed in Takaranta. The area would be a suitable nesting place for the species which also nested in the area until 1980's.

DID YOU KNOW?

7 % of the endangered Little Tern's Finnish population breeds in the Kultalanlahti Bay, north to the Hanhikivi cape

IN THE HANHIKIVI CAPE THE NATURAL BIODIVERSITY CAN BE SEEN AND HEARD

Among the mosaic of the many natural habitat types live more than a hundred breeding bird species and over 250 plant species. The low-lying Hanhikivi cape is one of the most representative land up-lift coastal areas in Finland. It has an important role in preserving the habitat of threatened natural habitat types as well as bird and plant species.

"The survey of Hanhikivi natural habitat types indicates that the diversity of Hanhikivi area is in a league of its own. Almost the whole cape is covered by threatened habitat types. In addition the whole cape represents one of the most endangered natural habitat types: natural forest succession series of the land uplift coast."

- Northern Ostrobothnia Environment Centre 11/2009



Photo by Vuokko Moisala

■ **In the Takaranta and Lipinlahti areas** it is possible to find the threatened *Primula nutans var. jokelae* (Primrose). Finland is the only country of the EU where that species can be found.

MORE THAN 250 PLANT SPECIES

■ **The Hanhikivi cape hosts** valuable flora due to diversity. In the coastal herb-rich forests it is possible to find, for example, Red Campion, Wood Millet-grass, Herb Paris and Wood Stitchwort.

Rare species in the area include inter alia Sea Pea, Eyebright, Sedge, Adder's Tongue and various Pondweeds, for example, Fries' Pondweed and Large-sheath Pondweed.

THREATENED AND PROTECTED SPECIES

- **Artemisia bottnica**, critically endangered, protected
- **Hippuris tetraphylla**, endangered, protected
- **Primula nutans var. jokelae** (primrose), vulnerable, protected
- **Botrychium multifidum** (Moonwort), near threatened
- **Iris pseudacorus**, protected

■ **The cape is mostly only 1,5 meters** above the mean sea level. The low coasts are constantly exposed to huge variations of the sea level of the Bothnian Bay. Southwestern winds have risen the sea level in the area at the maximum to +162 cm while the lowest level has been -129 cm. Thus the range is almost three meters.



The land lifts up!

■ **The land uplift** can be seen in the nature of the Hanhikivi cape. The coastal bare sea floor becomes - zone by zone - first a coastal meadow, then a brushwood, a herb-rich forest and finally after many developments a needle-tree forest in the middle of the cape. In the area it is also possible to find many critically endangered flada and glo-lakes, which are typical to land uplift coasts.

■ **The Hanhikivi cape is one of the most notable** land up-lift coastal areas in Finland. The area is extraordinarily representative because it is wide, unified, mainly untouched and includes many remarkable conservation subjects. In addition to protected natural habitat types and significant traditional landscapes, the Hanhikivi cape contains many private nature reserves and Parhalahti-Syölähtinlahti-Heinikarinlampi Natura2000 -area, which also belongs to the nationwide bird water conservation programme.

■ **In the land uplift coastal areas** land has taken over the sea since the Ice Age. Land lifts up particularly fast on the coast of the Bothnian Bay, approximately 7-8 mm per year. The phenomenon is unique in the whole world.

■ **Natural forest succession series** of the land uplift coast is one of the most threatened natural habitat type in Finland and in whole Europe. It has been classified as critically endangered and primarily protected, and Finland carries a special international responsibility in preserving it. The coasts of the Bothnian Bay are the key areas in preserving land uplift coasts.

THE NATURAL HABITAT TYPES OF HANHIKIVI

■ **Critically endangered habitat types**
Natural forest succession series of the land uplift coast • Low graminoid seashore meadows • Tall sedge seashore meadows • Possibly also Salt patches.

■ **Endangered habitat types**
Coastal sand beaches • Coastal Picea abies dominated herb-rich heath forests • Coastal Picea abies dominated mesic heath forests • Glo-lakes (coastal lagoons) • Middle-aged deciduous-dominated herb-rich heath forests

■ **In addition more than 15 vulnerable or near threatened natural habitat types.**

■ **EU's Habitats Directive habitat types in Hanhikivi, for example**
Natural forests of primary succession stages of landupheaval coast • Coastal vegetated moraine, stone and boulder shores • Coastal sand beaches • Fixed coastal dunes with herbaceous vegetation ('grey dunes') • Herb-rich forests • Coastal lagoons • Boreal Baltic coastal meadows • Vegetated sea cliffs of the Atlantic and Baltic Coasts • Fennoscandian deciduous swamp woods