CAPES: BULVIKIS APE

eastern wind Surface protrusions into the water are called capes. Eastern shores of the Curonian spit are curled with capes, which provide natural shelter to littoral settlements. In the 18 – 19 centuries these capes were formed as accumulative sand protrusions under the influence of

Before forestation of the big dunes, Bulvikis cape grew very quickly: during years 1837 - 1910 it grew annually by approximately 7 m. At present the reverse process is taking place; the cape is continuously decreasing because it is being washed off by the bay currents. Located north from Nida settlement, Bulvikis cape can be easily reached by walking along the Bulvikis cape is the widest part of the Curonian Spit, reaching 3.8 km width. It is believed that the cape and the nearby bay names are derived from the Curonian name Bulvikis. There is another interpretation of the name – from the Swedish words bolja - wave and vik - bay.

lagoon shore, or from Nida-Preila bicycle road





By climbing onto Parnidis dune which is in the south of Nida, one may visit the white dunes habitat. This is the only place in the Kuršių Nerija National Park where drifting dunes still remain. To the south, Parnidis dune opens the scenery of shifting dunes in Grobšto Nature Reserve, and if the visibil-ity is good one can see the sands of the Russian Federation. Scientists estimate that due to the prevailing western winds traveling dunes moves from 0.5 to 10 m eastwards every year. Sand is light and friable rock, which is easily carried long distances by the wind. Dunes move by carrying sand grains from the windward slope of the dune to its other side. Grains of sand travel along small sand tranches, called wind ripples, until they are stopped by plants.

In the areas which are not visited by people the dune surface resemble seabed. These shifting dunes are called white dunes due to their light shade which is the result of the high quartz percentage in them – from 85 to 99 percent.

Large grasses, such as European beach grass, sea lyme-grass and bush grass cover moving sand areas. Due to their strong rhizomes these plants are able to grow in volatile coastal sand, and also trap it; their leaves dispel wind gusts. Therefore, these grasses provide shelter to more delicate plants, such as the leafy hawkweed, goat's-beard, Baltic toad-flax, and beach pea. Protection of highly sensitive and vulnerable white dune habitat requires regulation of visitors flow, therefore the access of specific areas is strictly prohibited. We kindly remind you that it is forbidden to climb up and down the eastern slopes of Parnidis dune.

individual route

AFFORESTED DUNES: VECEKRUGO DUNE



The large mounds have been formed along the whole Curonian peninsula. Geographers called it the great dune ridge. The average height of the great dune ridge is 25-30 m, and the width is 400 to 1,200 m. The dune of the Old Inn – Vecekrugas (Wetzekrugo) near Preila is the highest point of the dune ridge in the whole spit, reaching 67.2 m height. Its Preila is the highest point of the dune vece – old and kruogs – inn. The dune is overgrown by of 19th century. Its seedlings were transported from Denmark. Due to the pine root system, that is located in the upper soil layers, agile dunes' sand reinforced. me comes from the curonian word vece – old and kruogs – inn. The dune is overgrown mountain pines. The pine has been started to be planted all over the spit in the middle sand was well welldeveloped

Vecekrugas dune is one of the most eloquent examples of sand's reinforcement. Great dune ridge formation process began in 16-17 centuries, when massive deforestation destroyed the natural barrier, and sand started moving again. Due to the wind, sand began to move from the sea to the east burying trees, houses and even entire villages on its way. Faced with the impend-ing death by the end of 18 century, local inhabitants started to correct their mistakes. Complex works of dune reinforcement and foresting were started. First of all, the dunes have been reinforced by mechanical barriers: 30-40 cm tall branch or reed fences, which were arranged along and perpendicular to the prevailing winds (in squares). Later those areas were used for planting grasses and trees, mostly mountain pine. Lagoon marl and sludge were used to enrich the sandy soil. Mountain pines Visitors can easily reach Vecekrugas dune from both sides: from the mair ing Preila and Nida. An observation deck is set up on the top of the dune. and deciduous forests were planted on the dune foothills and valleys. main road Nida - Smiltynė, and the bicycle path connect-



forest, where the exposition of the kalnas" ("Hill of Witches") is also set. most attractive part to the visitors is the one located in the ancient Juodkrantė. These dunes circle the settlement from the west, The biggest array of forest covered parabolic wooden sculptures "Raganų dunes can be , but the seen in

many places. but in 16 – 18 centuries mass lumbering opened sand to the wind, resulting in the destruction of the parabolic dunes ir winds small washouts were formed, and the piles of sand were moved into the land, gradually turning into horseshoe-shaped formations called parabolic dunes. In time they got covered by grass and wood. Their height was up to 30-50 m, just emerging, first low sandy dunes started to appear on the western part of the land. Under the influence of western Parabolic dunes are the old (primevial) Curonian spit landscape element. 5 thousand years ago when Curonian spit was



GREY DUNES: COGNITIVE PATH OF NAGLIŲ NATURE RESERVE

observe exclusive habitat of the grey dunes, which is very rare in Europe Naglių natural reserve. It stretches 1 km to the east, and allows the visitors to We would suggest exploring the grey dunes (also called the dead dunes) at the 32^{nd} kilometer of Smiltynė – Nida road, where a pedestrian path is fitted in

and others) as well as moss and lichens, which count over 20 species here. to exist, and tawny pipit is also breeding here. Looking at the panorama gray dunes, it looks as if they are covered with a gray velvet carpet. This In the places protected from stinging sea winds, where the sand surface is is created by the dominant grasses (grey hair grass, blue hair grass, sand sedge ties of sand plants are formed. These conditions allow some rare insect species pletely covered by the carpet of moss, lichens and small grass, stable communiimage of the com This

walk only along delineated path. purposes; any human activity is prohibited here, so the visitors are Naglių nature reserve vegetation forms a coating that suspends the drifting of sand. Naglių nature reserve is a natural area reserved exclusively for scientific required to

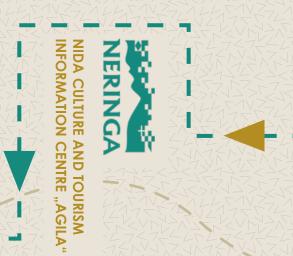
THE PROTECTIVE DUNE: SEA SIDE BEACH IN PREILA

wind. rows of dikes were built again to grow this mound even higher. In autumn, when the ridge got 1.5 m. in height, it used to be planted with sand grasses. Planting used to be done in perpendicular lines, which formed small squares sloping upward with increasing density, so that the sand would not be carried away by the away from each other, two rows of fences from thicker branches and stakes used to be built along the coast. When in two or three weeks sand covered them, two Every time when going to the sea, one has to climb over the dune ridge which stretches along the seashore. Generally these dunes are 3 to 4 m high, and 70 -150 m wide, but in some places they can be up to 14 m high. This ridge has several has been formed in stages. In spring about 50-60 m away from the sea and 2 m $\,$ aided by wind, se with brushwood fences ames: foredune, protective dune and protective ridge. Started by human hands ere started in 1805 -Eastern slope of the emerging dune ridge has been additionally stabilized anu l sand, it emerged 200 years ago. Foredune building works 1811 m. by Soren Bjorn, a scientist of Danish origin. Ridge

ridge still fulfills its original purpose, which is to deter the sand emissions from the sea not allowing it to drift further into the Spit. Extending across the whole Curonian Spit Seaside (almost 100 km) protective

maintaining the ridge. In spring eroded western slope of the dune ridge is being The administration of Kuršių Nerija National Park is constantly monitoring /ered by brushwoo which collects and traps the and

flowers, and by the autumn its branches get covered by red berries formation history, but also for the vegetation – it's ground-level is decorated with not by accident. ramanas rose pusnes. sand drifting The protective dune along Preila sea side beaches is amazing not Throughout the summer it is decorated with large pink fragrant ushes. This non-indigenous plant has been selected by foresters. This low decorative branchy shrub perfectly withstands strong only for its



www.visitneringa.com info@visitneringa.lt



WELCOME TO THE LAND OF THE SAND!

WE INVITE YOU TO DISCOVER AND EXPLORE THE CURONIAN SPIT DUNES. AND VISIT PLACES WHERE UNIQUENESS OF EACH OF THEM WILL BE DISCLOSED IN A BEST WAY. TAKING THIS ROUTE YOU WILL GET ACQUAINTED WITH DIFFERENT TYPES OF DUNES

RABOLIC DUNES: OLD-GROWTH FOREST OF JUODKRANTĖ