



Protected Natural Objects of
PÄRNU COUNTY

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PÄRNU COUNTY

ADMINISTRATIVE AUTHORITY OF PROTECTED NATURAL OBJECTS

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CONTENTS

Abbreviations and symbols	5
Protected areas and limited conservation areas	
West Pärnumaa	7
Map	22
East Pärnumaa	25
Pärnu City and surroundings	38
Erratic boulders	40
Trees and forest stands	42
Parks	43
References	44
Links	44



Photo: Long-tailed duck, M. Kose



Photo: Uulu Beach, V. Vlassov

Pärnumaa (Pärnu County) with its area of 4,807 km² is Estonia's largest county. It is situated in the West-Estonian Coastal Lowland in the south-west of the country. To the west, there is the Gulf of Livonia, and its land border is shared with the counties of Lääne, Rapla, Järva, and Viljandi as well as with the Republic of Latvia. By its climate, Pärnumaa is one of the warmest regions in Estonia.

There are plenty of small islands and islets in the Gulf of Livonia. The largest islands are Kihnu, Sorgu, Sangelaid, and Manilaid. Two sand dunes run along Pärnumaa's coast, and the Pärnu River and its tributaries flow inland towards the coast. The largest lakes are Tõhela and Ermistu. Pärnumaa has a predominantly flat relief which is covered with forests, expansive wetlands and meadows. The mild climate and varied topography determine the biodiversity and variety of habitats.

In order to protect and preserve natural values, protection areas and limited conservation have been formed, species' protection sites have been established, and animate or inanimate individual objects are conserved. As of 1 January 2012, Pärnumaa has one national park, 42 limited conservation areas, and 65 protected areas, including 13 landscape protection areas and 34 nature reserves. There are approximately 150 species' protection sites to protect the habitats of rare species. Approximately 25% of Pärnumaa's land territory is under protection.

"Protected Natural Objects of Pärnu County" briefly introduces the unique and important protected objects of the county.

Several objects were placed under protection many years ago, which refers to their long protected status and reflects the development of nature conservation. The study and hiking trails in the protected areas offer good possibilities to learn about the natural values of Pärnumaa.



Photo: Islets of Manilaid and Anilaid, M. Kose

ABBREVIATIONS AND SYMBOLS

LPA landscape protection area

NR nature reserve

RMK State Forest Management Centre

RP rules of protection

Ramsar wetland of international importance www.ramsar.org



WEST PÄRNUMAA

- 1 AUDRU POLDER LIMITED CONSERVATION AREA
- 2 LINDI NATURE RESERVE
- 3 TÕSTAMAA LANDSCAPE PROTECTION AREA
- 4 KASTNA LANDSCAPE PROTECTION AREA
- 5 TÕHELA-ERMISTU LIMITED CONSERVATION AREA
- 6 MANIJA LANDSCAPE PROTECTION AREA
- 7 SORGU ISLAND
- 8 SANGELAIUD ISLETS
- 9 KIHNU LIMITED CONSERVATION AREA
- 10 PÄRNU BAY LIMITED CONSERVATION AREA
- 11 PÄRNU RIVER LIMITED CONSERVATION AREA
- 12 NÄTSI-VÕLLA NATURE RESERVE
- 13 KOLGA NATURE RESERVE
- 14 PAADREMA NATURE RESERVE
- 15 NEDREMA NATURE RESERVE
- 16 MIHKLI NATURE RESERVE
- 17 KURESE LANDSCAPE PROTECTION AREA
- 18 AVASTE NATURE RESERVE
- 19 LAVASSAARE LIMITED CONSERVATION AREA
- 20 VAHENURME NATURE RESERVE

EAST PÄRNUMAA

- 21 KAISMA LIMITED CONSERVATION AREA
- 22 TAARIKÕNNU NATURE RESERVE
- 23 KURGJA-LINNUTAJA FARMLANDS
- 24 SAARJÕE LANDSCAPE PROTECTION AREA
- 25 OUTCROP AND CAVES OF TORI PÕRGU
(TORI HELL)
- 26 SOOMAA NATIONAL PARK
- 27 KOSEMÄE FOREST
- 28 ALLIKUKIVI CAVES AND SPRINGS
- 29 SOOKUNINGA NATURE RESERVE
- 30 NIGULA NATURE RESERVE
- 31 LAIKSAARE PINE FOREST, RANNAMETSA
RIVER ALLUVIAL FOREST
- 32 KIVIKUPITSA LANDSCAPE PROTECTION AREA
- 33 KABLI NATURE RESERVE
- 34 LUITEMAA NATURE RESERVE AND
LIMITED CONSERVATION AREA
- 35 UULU COASTAL PINE FORESTS,
SURJU COASTAL FORESTS,
UULU-VÕISTE
LIMITED CONSERVATION AREA

PÄRNU CITY AND SURROUNDINGS

- 36 NATURE RESERVE OF PÄRNU COASTAL MEADOW
- 37 NIIDU LANDSCAPE PROTECTION AREA
- 38 PÄRNU LANDSCAPE PROTECTION AREA



Photo: Lindi Bog, E. Käär



Photo: Tundra swans, V. Vlassov

WEST PÄRNUMAA

1. AUDRU POLDER LIMITED CONSERVATION AREA (proposed NR)

Location: Audru Rural Municipality

Area: 560 ha

Under protection since 2007

Habitats: habitat of endangered or rare species of birds, stop-over and feeding site suitable for migratory birds.

Species: Tundra and whooper swans; barnacle goose, northern pintail, spotted crake, corncrake, Baltic dunlin, ruff, black-tailed godwit; spotted and common redshanks; redshank, wood sandpiper, common greenshank, whimbrel, Eurasian curlew, European golden plover, red-backed shrike, white-tailed eagle, western marsh harrier, common kestrel.

To prevent floods, Estonia's first polder was constructed in Audru in 1938. Nowadays, the polder area is an important breeding site for thousands of tundra swans and other migratory waterfowl.

2. LINDI NATURE RESERVE

Location: Tõstamaa and Audru Rural Municipalities

Area: 1,095 ha

Under protection since 1958, under rules of protection (RP) since 1999

Habitats: raised bog, species-rich fen, natural old and old broad-leaved forests, herb-rich forest with *Picea abies*, deciduous swamp woods, bog woodland.

Species: European yew, fir club-moss, broad-leaved helleborine, lesser twayblade, lady's slipper; lesser spotted and white-tailed eagles, common buzzard, three-toed woodpecker, hazel grouse.

The Lindi Bog developed from a lagoon of the Littorina Sea, surrounded with a high dune ridge, at the paludification of the mineral soil. The extensive open bog, numerous hollows and pools as well as the overgrowing lakes together with the surrounding forests provide habitats for plenty of species of plants and animals.



Photo: Common buzzard, E. Käär

3. TÕSTAMAA LANDSCAPE PROTECTION AREA

Location: Tõstamaa Rural Municipality

Area: 516 ha land, 766 ha water area

Under protection since 1976, under RP since 2007

Habitats: coastal meadow, sandbank covered with sea water, reef, small island, islet, dry grassland on calcareous substrate.

Species: marsh angelica, barnacle goose, western marsh harrier, tundra swan, red-backed shrike, velvet scoter; common, arctic and little terns; barred warbler; spotted and common redshanks; wood sandpiper.

The landscapes of the protected area include the rolling dune ridges on Tõstamaa Peninsula, jagged coastal plain and the islets of Tõstamaa. The highest dune is Levaroti Hill (29 m). The greatest value of the area is its coastal meadows as heritage landscapes.

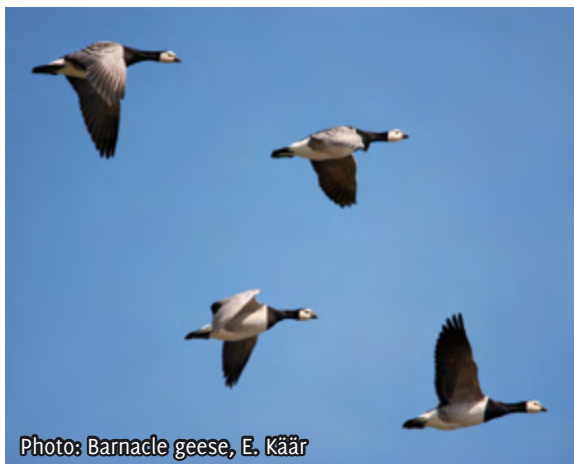


Photo: Barnacle geese, E. Käär



Photo: Bird-watching tower at Kavaru, H. Luhamaa



Photo: Coastal meadow at Saulepi, H. Luhamaa



Photo: Juniper stand at Kastna, M. Palginõmm

4. KASTNA LANDSCAPE PROTECTION AREA

Location: Tõstamaa Rural Municipality

Area: 123 ha

Under protection since 2007

Habitats: annual vegetation of drift line, perennial vegetation of stony bank, coastal meadow, *Juniperus communis* formation, alvar.

Species: marsh angelica, ruddy turnstone, Baltic dunlin, western marsh harrier, red-backed shrike, ringed plover.

The beach communities, typical of West Estonia, occur in the protected area. Kastna Peninsula offers splendid views on the beach, in the juniper stands, and on the village roads. The scattered farms, the historical road network, and an old timber load line have survived in the landscape. The area boasts mighty juniper stands and the Three Kastna Oaks.



Photo: Ringed plover, E. Käär



Photo: Lake Tõhela, H. Luhamaa

5. TÕHELA-ERMISTU LIMITED CONSERVATION AREA (proposed NR)

Location: Tõstamaa Rural Municipality

Area: 1,793 ha

Under protection since 2007

Habitats: hard oligo-mesotrophic lake, raised bog, transition mire and quaking bog, natural old and old broad-leaved forests, coniferous forest on glaciofluvial esker, deciduous swamp woods, bog woodland.

Species: slender naiad, large white-faced darter; lilypad and dark whitefaces; great bittern, red-necked grebe, whooper swan, little gull, common redshank, spotted crane, common crane, European golden plover, wood sandpiper, black tern; pygmy and Ural owls; western marsh harrier; hazel and black grouse; European nightjar; white-backed, three-toed, black and grey-headed woodpeckers; red-breasted flycatcher; Eurasian, white-tailed and golden eagles; red-backed and great grey shrikes; mud loach.

The limited conservation area and the proposed nature reserve encompass Pärnumaa's largest lakes of Ermistu and Tõhela, and the surrounding wetlands and forests. Lake Tõhela is the fountainhead of the Paadrema River. Lake Ermistu with its floating islands is fed by small brooks and its only outlet is the Tõstamaa River. The bottom of the eutrophic Lake Ermistu is covered with a five-metre-thick mud layer. The medicinal mud, or sapropel, is used in medical institutions.



Photo: Black-headed gulls, E. Käär

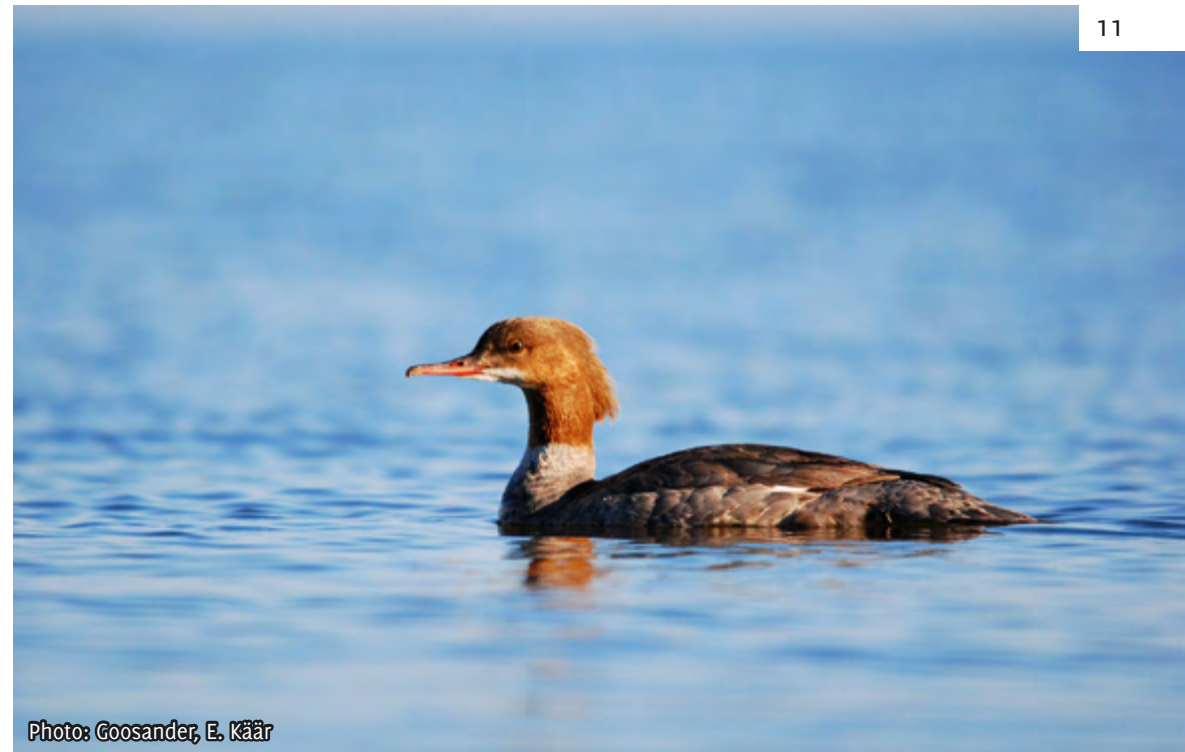


Photo: Goosander, E. Käär

6. MANIJA LANDSCAPE PROTECTION AREA

Location: Tõstamaa Rural Municipality

Area: 204 ha

Under protection since 1991, under RP since 2006

Habitats: small island and islet landscapes, cultural heritage landscape, coastal and wooded meadows, coastal lagoon, erratic boulder of Kotkakivi.

Species: sea holly; musk, early-marsh and military orchids; marsh helleborine, common twayblade, small pasque flower, natterjack toad, western marsh harrier, ringed plover, Baltic dunlin, ruff, black-tailed godwit, common redshank, ruddy turnstone; common, arctic and little terns; short-eared owl, barred warbler, red-backed shrike.

The Manija Landscape Protection Area is made up of the islets of Manilaid and Anilaid.

A back ridge with plenty of erratic boulders, with Kotkakivi (*Eagle's Rock*) being the highest, runs along low and narrow Manilaid. In order to restore the coastal habitats, cattle and sheep graze on the island and the ponds with the natterjack toad are well-managed. Manilaid is included into the UNESCO Lists of Intangible Cultural Heritage as a part of the Kihnu Cultural Space.



Photo: Landscape on Manija, Ü. Tamm



Photo: Sorgu Island, H. Luhamaa

7. SORGU ISLAND (proposed NR)

Location: Tõstamaa Rural Municipality

Area: 3 ha

Under protection since 1991

Habitats: islet landscape.

Species: common shelduck, velvet scoter, common redshank; sandwich and common terns; alk, ringed plover, ruddy turnstone.

The protected area has been founded primarily for the protection of avifauna. The small, rocky and inhabited Sorgu Island is a stop-over site for numerous species of birds.

8. SANGELAIUD ISLETS (proposed Kihnu Islets NR)

Location: Kihnu Rural Municipality

Area: 201 ha

Under protection since 1964

Habitats: sandbank covered with sea water, small island, islet.

Species: common shelduck, northern pintail, velvet scoter, common redshank; sandwich, common and arctic terns; ringed plover, ruddy turnstone; grey and ringed seals.

The protected area consists of several islets: Sangelaud, Umalaud, Imutlaud, etc. Their characteristic features are oblong shapes, pebbly beaches and the surrounding reefy shallows. The islets and sea offer breeding sites for coastal birds and staging posts for migratory birds. In April and May, the neighbourhood of the islets of Sangelaud and Sillalaud sees the largest aggregations of ringed seals in the Baltic Sea.



Photo: Common shelduck, E. Käär



Photo: Ringed seals, J. Tenson



Photo: Wooded meadow at Võhke, H. Luhamaa



Photo: Dwarf everlast, H. Luhamaa

9. KIHNU LIMITED CONSERVATION AREA

Location: Kihnu Rural Municipality

Area: 1,096 ha

Under protection since 2007

Habitats: sandbank covered with sea water, coastal lagoon, drift line, small island, islet, coastal meadow, sand beach with perennial vegetation, white and grey dunes, *Juniperus communis* formation, dry grassland on calcareous substrate, species-rich dry to mesic grassland, alvar, *Molinia* meadow, hydrophilous tall herb community, wooded meadow, species-rich fen, natural old forest, wooded pasture, deciduous swamp woods.

Species: marsh angelica, fen orchid, common redshank, black-tailed godwit, ruff, ringed plover; grey and ringed seals.

Kihnu Island is low and flat. The island is covered with park-like heath and dry boreal pine forests, extensive coastal meadows, and species-rich wooded grasslands. The southern and north-western coasts are bordered with junipered pastures. Plant communities, rare in Estonia, grow on the sandy beach ridges. The Kihnu cultural space has been entered into the UNESCO Lists of Intangible Cultural Heritage.



Photo: Young whooper swans, E. Käär

10. PÄRNU BAY LIMITED CONSERVATION AREA

Location: Audru, Tahkuranna, Tõstamaa and Varbla Rural Municipalities

Area: 103,162.8 ha

Under protection since 2007

Habitats: habitats, stop-over and breeding sites for species of migratory birds.

Species: tundra and whooper swans; barnacle goose, common shelduck, northern pintail, greater scaup, velvet scoter, smew, spotted crake, corncrake, Baltic dunlin, ruff; black-tailed and bar-tailed godwits; spotted and common redshanks; wood sandpiper, lesser black-backed gull; common, arctic and little terns; white-tailed eagle, western marsh harrier, ringed plover, ruddy turnstone, red-backed shrike.

The Pärnu Bay Limited Conservation Area has been founded to conserve the habitats of protected birds. More than 20,000 waterfowl stop here during their spring and autumn migration. Pärnu Bay is most important for tundra and whooper swans, as well as for barnacle geese.

11. PÄRNU RIVER LIMITED CONSERVATION AREA

Location: Pärnu and Sindi Cities; Sauga, Tori and Väandra Rural Municipalities.

Length: 144 km, incl. 90 km in Pärnumaa

Under protection since 2007

Habitats: river and brook.

Species: thick shelled river mussel, spined loach, bullhead, river lamprey, salmon.

The Pärnu River finds its source at Roosna-Alliku in Järvamaa and debouches into Pärnu Bay. The Pärnu River Limited Conservation Area aims at the protection of the river and brook habitats as well as of river biota.



Photo: Nätsi-Võlla Bog, M. Kose

12. NÄTSI-VÕLLA NATURE RESERVE

Location: Audru, Koonga and Tõstamaa Rural Municipalities

Area: 10,740 ha

Under protection since 1957, under RP since 2004

Habitats: dystrophic lake and pond, raised bog, *Molinia* meadow, alluvial and wooded meadows, transition mire and quaking bog, species-rich fen, natural old and old broad-leaved forests, herb-rich forest with *Picea abies*, deciduous swamp woods, bog woodland.

Species: sweet gale, Arctic raspberry, lady's slipper, deer grass, European golden plover, wood sandpiper, common crane, ruff, whooper swan, Montagu's harrier, merlin, golden eagle; black and willow grouse; red-backed shrike.

After the retreat of Ancylus Lake 10,000 years ago, a lake was expanding here, the overgrowth of which resulted in the formation of the Nätsi-Võlla Bog. Inaccessible bog pools and wooded bog islands expand in the large raised bog of little human impact. Old oaks, European crab apples and several species of orchids grow in the deciduous forests, developed from former wooded meadows and pastures.



Photo: Sweet gale, E. Käär



Photo: Kingfisher, E. Käär

13. KOLGA NATURE RESERVE

Location: Varbla Rural Municipality

Area: 274 ha

Under protection since 1991, under RP since 2006

Habitats: wooded dune, river, brook, natural old forest, deciduous swamp woods, deciduous alluvial forest.

Species: flat-stemmed clubmoss, common twayblade, bird's nest orchid, spined loach, river lamprey, sand lizard; white-tailed eagle; eagle owl and pygmy owls; stock dove, hazel grouse; three-toed, black and white-backed woodpeckers; red-breasted flycatcher.

The Kolga Dunes, formed from the sediments of Baltic Ice Lake and Ancylus Lake, are natural monuments of national importance and have been entered into the Book on Virgin Nature of Estonia. Heath and boreal forests grow on the dunes. An alluvial forest grows on the high sandy banks of the Kolga Brook, which flows in its natural bed and debouches into Vaiste Bay.

14. PAADREMA NATURE RESERVE

Location: Varbla Rural Municipality

Area: 1,332 ha

Under protection since 2003

Habitats: species-rich fen, deciduous swamp woods, hydrophilous tall herb community, natural old and old broad-leaved forests, herb-rich forest with *Picea abies*, wooded and species-rich meadows.

Species: sweet gale, orchids, white-tailed eagle, common crane, wood sandpiper, corncrake, white-spotted bluethroat, red-backed shrike.

The groundwater-fed Paadrema Fen, developed as a result of the paludification of mineral soil, expands in the nature reserve. The fen is prevalently surrounded with deciduous swamp woods and, in places, with coniferous forests. Some oaks, older than 100 years, and 150-200-year-old mixed forests with pines grow on the back ridge in the south-east of the nature reserve.



Photo: Red-backed shrike, V. Voolaid

15. NEDREMA NATURE RESERVE

Location: Koonga Rural Municipality

Area: 2,429 ha

Under protection since 1991, under RP since 2007

Habitats: natural dystrophic lake and pond, wooded meadow, raised bog, species-rich fen, deciduous old forest, deciduous swamp woods, bog woodland.

Species: sweet gale; common spotted, early-marsh, heath-spotted and fragrant orchids; broad-leaved and marsh helleborines; common and European honey buzzards; Ural owl; white-backed and grey-headed woodpeckers; European golden plover, common crane, wood sandpiper, common redshank.

The nature reserve with its damp ground and varied relief lies between two bogs. The local natural wetland communities have a high protection value. The Nedrema Wooded Meadow is Europe's largest managed wooded meadow. Mycologists value the area for its plentiful species of fungi, with numerous rare and uncommon species among them. In Nedrema, 236 species of vascular plants grow, 17 species of plants are under protection, 15 out of which are different orchids. 54 species of vascular plants per square metre have been counted in the Nedrema Wooded Meadow.



Photo: Nedrema Wooded Meadow, H. Luhamaa



Photo: Lady's slipper, E. Käär

16. MIHKLI NATURE RESERVE

Location: Koonga Rural Municipality

Area: 89 ha

Under protection since 1957, under RP since 2004

Habitats: species-rich oak forest, old broad-leaved deciduous forest.

Species: lady's slipper, species of deciduous trees.

The nature reserve has been founded to protect the oak forest and its biodiversity. The Mihkli Oak Forest with its age of ca 250 years is one of Estonia's most significant natural oak stands. The circumference of the largest oak amounts to 3.83 m and its maximum height is 23 m. European crab apples and 120-130-year-old birches grow in the shade of the old oak forest.

17. KURESE LANDSCAPE PROTECTION AREA

Location: Koonga Rural Municipality

Area: 522 ha

Under protection since 1976, under RP since 2007

Habitats: *Juniperus communis* formation, alvar, species-rich fen, natural old forest, herb-rich forest with *Picea abies*, wooded pasture.

Species: maidenhair spleenwort, lady's slipper, common twayblade; fly, military, fragrant and common spotted orchids; marsh, broad-leaved and dark-red helleborines; marsh fritillary.

Kurese boasts its nucleated villages, extensive stone fences, ancient fields as well as the karst areas, protected species and their habitats. The local landscapes developed on the coral reef of a tropical sea 420 m years ago. Now the hill of Mihkli Salumägi (*Michael's*



Photo: Site of former Kurese Village, U. Vahur

Grove Hill) towers on the limestone tor. The Kibura Karst Area, Salumägi Hill and two springs have been entered into the Book on Virgin Nature of Estonia. The main value of the landscapes is the wooded pastures and alvars with sparse juniper stands, which are restored and managed. Kurese Village dates back to the Bronze Age. The local findings – ancient fields, a burial mound and a cupmarked sacred stone – are heritage objects.

18. AVASTE NATURE RESERVE

Location: Koonga Rural Municipality in Pärnu County, Vigala Rural Municipality in Rapla County

Area: 5,226 ha, incl. 3,424 ha in Pärnu County

Under protection since 1981, under RP since 2001

Habitats: raised bog, transition mire and quaking bog, species-rich fen, deciduous swamp woods, bog woodland, natural old and old broad-leaved forests, *Molinia* meadow, wooded meadow, grassland on calcareous substrate .

Species: sweet gale, moor rush, fen and bog orchids, lady's slipper and other orchids; mud and white beak sedges, black stork, black-tailed godwit; golden, white-tailed, lesser spotted eagles; short-eared owl, northern goshawk, European honey buzzard; western marsh, Montagu's and hen harriers; capercaillie, great snipe, white-backed woodpecker.

The nature reserve boasts one of Estonia's largest fens, the Avaste Fen with its geological, water protection and ecological values, as well as the damp forests which offer habitats to several rare species. Researchers have long and profoundly studied the vegetation, insects and birds of the wetlands. The ancient Soontagana Stronghold on the edge of the Avaste Fen, dating back to the 2nd millennium, is a heritage site.



Photo: Black-tailed godwit, M. Sepp



Photo: Baltic dunlin, H. Luhamaa

19. LAVASSAARE LIMITED CONSERVATION AREA (proposed NR)

Location: Audru, Halinga and Koonga Rural Municipalities

Area: 8,599 ha

Under protection since 2007

Habitats: dystrophic lake and pond, dry grassland on calcareous substrate, wooded meadow, raised bog, transition mire and quaking bog, old deciduous forest, bog woodland, *Juniperus communis* formation, alvar.

Species: Slavonian grebe; tundra and whooper swans; common crane, European golden plover, Baltic dunlin, ruff, black-tailed godwit, whimbrel, common redshank, wood sandpiper, little gull; white-tailed and golden eagles; western marsh, hen and Montagu's harriers; Ural owl; willow and black grouse, capercaillie, European nightjar; black and white-backed woodpeckers; red-breasted flycatcher; red backed and great grey shrikes.

The objective of the nature reserve is to protect the Lavassaare Wetlands and the surrounding forest and heritage communities. The proposed nature reserve will also cover Virussaare Bog Island, which is called Lavassaare Hill and rises 31 m a.s.l. as a relic from the glacial age. You can go there by train, run by the Estonian Museum Railway. Lake Lavassaare is a well-known recreation place.

20. VAHENURME NATURE RESERVE

Location: Halinga Rural Municipality

Area: 221 ha

Under protection since 2006

Habitats: dry grassland and scrubland on calcareous substrates, Fennoscandian wooded meadow, alkaline species-rich fen, natural old and old broad-leaved forests, herb-rich forest with *Picea abies*, wooded pasture.

Species: sweet gale, *Saussurea alpina* subsp. *esthonica*, Siberian iris, bog violet; common spotted, blood-red *Dactylorhiza*, early-marsh, fragrant, lesser butterfly orchids; marsh helleborine, common twayblade, black stork, hazel grouse.

The main values of the nature reserve are its species-rich wooded meadows, natural forests and habitats of protected species. The former farm fields are developing into grasslands and forests are growing in the place of pastures. 239 species of vascular plants, 12 of which are protected, grow in the nature reserve. In a local wooded meadow, 73 species of vascular plants per square metre have been counted.



Photo: Nest of golden eagle, E. Lelov



Photo: Maidenhair spleenwort, U. Vahur



Photo: Fragrant orchid, M. Palginõmm



WEST PÄRNUMAA

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- KASTNA LANDSCAPE PROTECTION AREA
- TÕHELA-ERMISTU LIMITED CONSERVATION AREA
- MANIJA LANDSCAPE PROTECTION AREA
- SORGU ISLAND
- SANGELAIUD ISLETS
- KIHNU LIMITED CONSERVATION AREA
- PÄRNU BAY LIMITED CONSERVATION AREA
- PÄRNU RIVER LIMITED CONSERVATION AREA
- NÄTSI-VÖLLA NATURE RESERVE
- KOLGA NATURE RESERVE
- PAADREMA NATURE RESERVE
- NEDREMA NATURE RESERVE
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- KABLI NATURE RESERVE
- LUITEMAA NATURE RESERVE AND LIMITED CONSERVATION AREA
- UULU COASTAL PINE FORESTS, SURJU COASTAL FORESTS, UULU-VÖISTE LIMITED CONSERVATION AREA

PÄRNU CITY AND SURROUNDINGS

- NATURE RESERVE OF PÄRNU COASTAL MEADOW
- NIIDU LANDSCAPE PROTECTION AREA
- PÄRNU LANDSCAPE PROTECTION AREA



Photo: View of Pärnu, M. Kose



Photo: Early-marsh orchid, M. Palginõmm



Photo: *Saussurea alpina subsp. esthonica*, M. Palginõmm



Photo: Black grouse, V. Voolaid

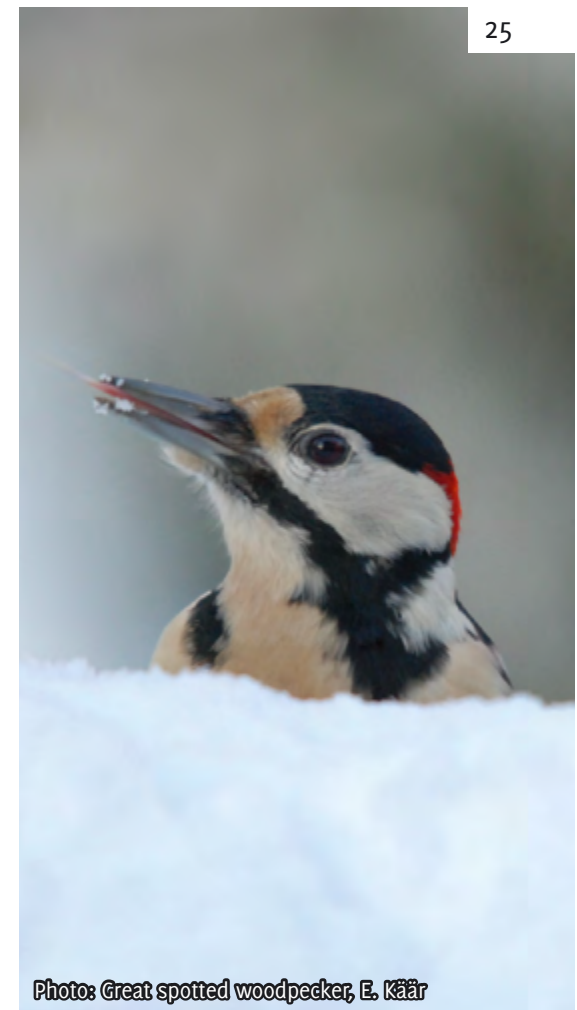


Photo: Great spotted woodpecker, E. Käär

EAST PÄRNUMAA

21. KAISMA LIMITED CONSERVATION AREA

Location: Väandra Rural Municipality

Area: 2,568 ha

Under protection since 2007

Habitats: hard oligo-mesotrophic lake, raised bog, transition mire and quaking bog, species-rich fen, natural old and old broad-leaved forests, bog woodland.

Species: *Saussurea alpina subsp. esthonica*, lady's slipper, whooper swan, European golden plover, black tern, European honey buzzard; western marsh, hen and Montagu's harriers; golden eagle, Ural owl, eagle owl; hazel and black grouse; capercaillie, common crane, black stork, black woodpecker, European nightjar, mud loach.

The lakes of Kaisma Suurjärv (*Big lake*) and Väikejärv (*Small lake*) formed at the stage of the Jolida Sea. The lakes with mud-covered bottoms are connected with each other. The shores are mostly peaty or muddy, while the eastern shores are, in places, covered with shingle and large erratic boulders. The lakes are surrounded by the bog and bog pine forest, where several human-shy species have found their habitats.

22. TAARIKÖNNU NATURE RESERVE

Location: Väandra Rural Municipality in Pärnu County, Kehtna Rural Municipality in Rapla County

Area: 2,820 ha, incl. 2,349 ha in Pärnu County

Under protection since 2001

Habitats: dystrophic lake and pond, raised bog, transition mire and quaking bog, depression on peat substrates of *Rhynchosporion*, natural old forest, herb-rich forest with *Picea abies*, deciduous swamp woods, bog woodland.

Species: European golden plover, wood sandpiper, common greenshank, northern goshawk, golden eagle, Ural owl, capercaillie, common crane, black stork; grey-headed, black, white-backed and three-toed woodpeckers; European nightjar, red-breasted flycatcher.

The bogs of Taarikõnnu (also known as Põrguraba – *Hell's Bog*), Laianiidu and Lõo, or Aruniidu, result from the paludification of waters and have not been much affected by human activities. The rivers of Nurtu and Sauga have their sources in the nature reserve.



Photo: Capercaillie, M. Kose



Photo: Pygmy owl, R. Lillemäe

23. KURGJA-LINNUTAJA FARMLANDS

(proposed Kurgja LPA)

Location: Vändra Rural Municipality

Area: 103 ha

Under protection since 1959

Habitats: farm park, heritage landscape, natural forest, habitat of endangered or rare species.

Species: pygmy owl, capercaillie, hazel grouse; black and grey-headed woodpeckers; red-breasted flycatcher, spined loach, bullhead.

The protected area includes the former farmlands owned by Carl Robert Jakobson, and is of mainly cultural-historical importance. The forests, which surround the farm and provide habitats for the capercaillie, will be merged with the landscape protection area.



Photo: Black stork, U. Sellis



Photo: Outcrop of Tori Põrgu, M. Palginõmm

24. SAARJÕE LANDSCAPE PROTECTION AREA

Location: Vändra Rural Municipality

Area: 200 ha in Pärnu County

Under protection since 2006

Habitats: river, brook, *Molinia* meadow, alluvial meadow, spring, springfen, natural old and old broad-leaved forests, herb-rich forest with *Picea abies*, deciduous swamp wood, bog woodland.

Species: lady's slipper, thick shelled river mussel, bullhead, black stork.

The protected area is located in Transitional Estonia's forest zone where damp and humid mixed-deciduous forests grow. The river of Saarjõgi flows through the area in its natural bed. In the west, the protected area borders on the Pikkmetša River.

25. OUTCROP AND CAVES OF TORI PÕRGU (TORI HELL)

Location: Tori Rural Municipality

Area: 2 ha

Under protection since 1959

Habitats: sandstone denudation, cave.

Species: kingfisher, sand martin.

In Tori, on the left bank of the Pärnu River, the most dignified Central-Devonian sandstone outcrop in the north-east of Europe is denuded. The outcrop is 9 m in height and 400 m in length, and it encompasses three caves of spring origin. The Tori Outcrop is an internationally known place for finding fossil fish and plants. Kingfishers and sand martins breed on the sandstone denudations. The folk lore has created plenty of vivid stories about the Tori Hell and Old Heathen's deeds there.

26. SOOMAA NATIONAL PARK

Location: Paikuse, Tori and Vändra Rural Municipalities in Pärnu County, Kõpu and Suure-Jaani Rural Municipalities in Viljandi County

Area: 39,640 ha

Under protection since 1957, under RP since 2005

Habitats: wooded dune, river, brook, alluvial meadow, raised bog, natural old forest, herb-rich forest with *Picea abies*, deciduous swamp wood, bog woodland, alluvial swamp wood.

Species: lady's slipper, thick shelled river mussel, *Dytiscus latissimus*, scarce fritillary, large copper butterfly, spined loach, bullhead; tundra and whooper swans; Baltic dunlin, great snipe, corncrake; lesser spotted and golden eagles; Ural owl; black, grey-headed, white-backed and three-toed woodpeckers; black stork, capercaillie; black and willow grouse; red-breasted flycatcher, flying squirrel, Eurasian otter.

The development of Soomaa and its nearly intact bog expanses started about 10,000 years ago, after the Baltic Ice Lake had found an outflow into the ocean. Forests, wetlands, alluvial meadows, and cultural heritage are protected in the national park.

Forests cover a third of the area, while wetlands expand across the rest. The bogs of Soomaa make up Estonia's most important breeding areas for golden plovers, whimbrels, and wood sandpipers. Thousands of geese stop over in the Kuresoo Bog during their migration.

The bogs are separated by the rivers of Navesti, Halliste, Raudna, and Lemmijõgi. Flooded rivers bring forth "the fifth season", which means an overwhelming flood in Soomaa. Suspension bridges across the rivers as well as one-log-boats are unique features of the area.

The wetlands are bordered with swamp forests. Fen forests grow in the areas with decomposed peat layer while bog forests spread on bog peat. Decaying swamp forests have arisen when swamp forests have been drained for a long time. Dry and sunlit heath and boreal pine forests grow on the dunes.

Soomaa is a part of the network of wetlands and bird areas of international importance and of the Protected Area Network of Parks (PAN Parks).

The Riisa Study Trail (4.8 km) starts at the car park on the Pärnu-Jõesuu-Tõramaa Road, and is provided with a map and an information board. The boardwalk runs in the bog and along the Navesti River bank forest. www.rmk.ee



Photo: Soomaa National Park, M. Kose



Photo: Siberian iris, M. Palginõmm



Photo: Ural owl, E. Käär



Photo: Inside of Allikukivi Cave, V. Soomann

27. KOSEMÄE FOREST

(proposed LPA)

Location: Saarde Rural Municipality

Area: 47 ha

Under protection since 1964

Habitats: natural old forest.

Species: Tengmalm's and Ural owls; red-breasted flycatcher.

Forest stands grow on the sand dunes. The main value of the area is the dry boreal forest with old pine trees and cowberries. Kosemäe is a favoured recreation spot favoured by local people.

28. ALLIKUKIVI CAVES AND SPRINGS

(proposed LPA)

Location: Saarde Rural Municipality

Area: 17 ha

Under protection since 1976

Habitats: spring, springfen, cave, natural forest.

Species: large copper butterfly, brown long-eared bat, northern bat.

The Allikukivi (*Spring Rock*) Caves are located on the Devonian red sandstone slope of the Allikukivi Ancient Valley. The spring-fed cave consists of three grottoes. With its length of 33 metres the Allikukivi Cave is the third-longest natural cave in Estonia.



Photo: Wood sandpiper, V. Voolaid

29. SOOKUNINGA NATURE RESERVE

Location: Saarde Rural Municipality

Area: 5,869 ha

Under protection since 1964, under RP since 2006

Habitats: river, brook, tall-herb meadow, alluvial meadow, meadow with *Alopecurus pratensis* and *Sanguisorba officinalis*, wooded meadow, raised bog, transition mire and quaking bog, old deciduous and natural old forest, herb-rich forest with *Picea abies*, deciduous swamp wood, bog woodland.

Species: whooper swan, lesser white-fronted goose, corncrake, wood sandpiper, common crane; lesser spotted and golden eagles; European honey buzzard, Montagu's harrier; Ural and pygmy owls; hazel grouse, European nightjar, black stork; white-backed, three-toed and grey-headed woodpeckers; black grouse, capercaillie, red-backed shrike, red-breasted flycatcher, pond bat, Eurasian otter.

The nature reserve conserves extensive wetlands and forests as well as their biota. The Sookuninga and Nigula Mires of international importance and the Ziemelu Purvi Ramsar Area in Latvia make up the first cross-border wetland of Estonia. On the Estonian side, there are seven mires, where several Estonia's and Latvia's rivers find their sources or get there water. The nature reserve encompasses the oldest large bogs of South-West Estonia. The nature reserve is an important breeding area of large carnivores, a lek site for capercaillies as well as a breeding and feeding site for endangered species of birds. In Sookuninga, some traces of human activities can be found: farm sites, secret roads sunk into mire, war-time sanctuaries on bog islands, etc.

Hiking trail. The Sandra boardwalk (300 m) lies in the Rongu Bog. The trail passes through the bog and finishes at an observation tower. www.rmk.ee



Photo: Nigula Mire, V. Vlassov

30. NIGULA NATURE RESERVE

Location: Häädemeeste and Saarde Rural Municipalities

Area: 6,398 ha

Under protection since 1957, under RP since 2006

Habitats: dystrophic lake and pond, hydrophilous tall herb community, meadow with *Alopecurus pratensis* and *Sanguisorba officinalis*, raised bog, transition mire and quaking bog, natural old and old broad-leaved forests, herb-rich forest with *Picea abies*, wooded pasture, deciduous swamp woods, bog woodland.

Species: *Polyporus tuberaster*, Lindberg's sphagnum, least water lily, drooping woodreed, lady's slipper, Baltic marsh, narrow-leaved marsh and bog orchids; lesser twayblade, whooper swan, lesser white-fronted goose, corncrake, wood sandpiper, common crane, lesser spotted eagle, Montagu's harrier, honey buzzard; Ural and pygmy owls; hazel, willow and black grouse; European nightjar, black stork; white-backed, three-toed and grey-headed woodpeckers; red-backed shrike, red-breasted flycatcher, flying squirrel.

Nigula is known as Estonia's oldest and best researched mire and forest ecosystem. The Nigula Bird Area and Wetland of international importance belongs to the transboundary North-Livonian Wetland Complex. The relict lake of Nigula and five bog islands lie in the wetlands. On the island called Salupeaks a deciduous forest grows, which is a relic from the warm and moist climate 5,000–6,000 years ago. Flying squirrels and large predators live in the local forests, while the fields offer food for migrating cranes, swans and geese.

A study trail starts from the car park near Lake Nigula, where you can also find an information board provided with a map and explanations. www.rmk.ee



31. LAIKSAARE PINE FOREST, RANNAMETSA RIVER ALLUVIAL FOREST

(proposed NR)

Location: Häädemeeste and Saarde Rural Municipalities

Area: 1.8 ha

Under protection since 1991

Habitats: natural river, brook, natural old forest, herb-rich forest with *Picea abies*, deciduous alluvial forest.

Species: tree lungwort, Ural owl, hazel grouse; white-backed, three-toed, grey-headed and middle spotted woodpeckers; red-breasted flycatcher.

The valley of the Rannametsa River, which flows through the protected area, intersects sharply into the high moraine bank. In places, the steep slopes reach the height of 15 metres. Big differences in the growing conditions and indentations in the river valley create favourable preconditions for the existence of diversified and valued biota in a relatively small area.

A study trail goes outside the borders of the protected area. The trail (2.2 km) starts at the office of the Laiksaare Forest District, where you can also find an information board with a map and explanations. www.rmk.ee

32. KIVIKUPITSA LANDSCAPE PROTECTION AREA

Location: Häädemeeste Rural Municipality

Area: 135 ha

Under protection since 1964, under RP since 2007

Habitats: boulder field, natural old and old broad-leaved forests, coniferous forest on glaciofluvial esker.

Species: common twayblade, bird's nest orchid; pygmy and Ural owls; hazel grouse; grey-headed, black, white-backed and three-toed woodpeckers; red-breasted flycatcher.

The protected area is situated near the Latvian border, which is designated with a landmark called Kivikupits (*Stone Landmark*). There is a gravelly and wooded ridge in the north-westerly – south-easterly direction of approximately 600 m in length, up to 150 m in width, and about 7 m in height.

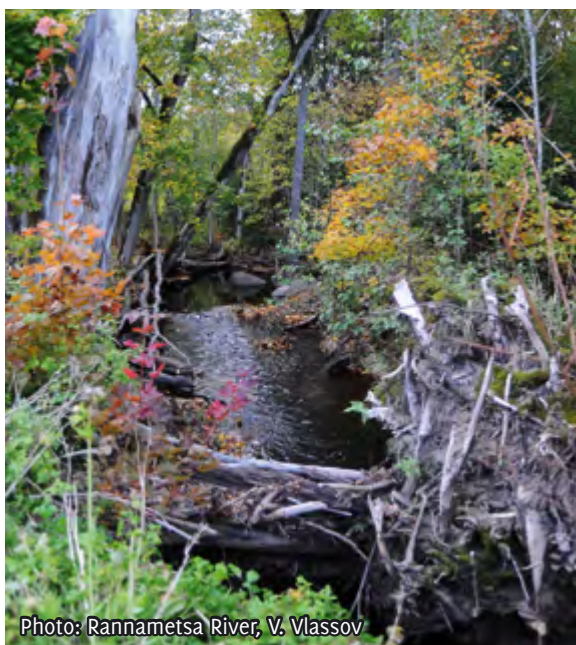


Photo: Rannametsa River, V. Vlassov



Photo: Common twayblade, M. Palginõmm



Photo: Kabli Bird Station, V. Palginõmm

33. KABLI NATURE RESERVE

Location: Häädemeeste Rural Municipality

Area: 733 ha, incl. 24 ha land, 709 ha water area

Under protection since 1991, under RP since 2007

Habitats: mudflat and sandflat, coastal meadow, white, grey and wooded dunes, humid dune slack, river, brook, natural old forest, deciduous swamp woods.

Species: marsh angelica, sandy pink, Baltic marsh orchid, river lamprey, natterjack toad, salmon, Eurasian otter.

The nature reserve has been founded to protect the coastal landscape, protected species and birds' migratory routes. The Kabli Bird Station was launched in 1969 for the observation of migrating birds. Every autumn, an average of 10,000–20,000 birds is ringed in Kabli. Furthermore, the migration of bats, dragonflies and butterflies has been studied here in the past years. The bird station works annually from middle August to early November.

A study trail starts at the RMK Kabli Nature Centre and is provided with a map with explanations. The Kabli Bird Station and a bird watching tower are located on the marked trail. www.rmk.ee



Photo: Goldcrest, M. Palginõmm



Photo: Singing natterjack toad, M. Kose

34. LUITEMAA NATURE RESERVE AND LIMITED CONSERVATION AREA

Location: Tahkuranna and Häädemeeste Rural Municipalities

Area: 8,745 ha, incl. 6,250 ha land and 2,495 ha water area

Under protection since 1964, under RP since 2006

Habitats: sandbank covered with sea water, sandflat and mudflat, coastal lagoon, large shallow bay, perennial vegetation of stony bank, small island, islet, coastal meadow, grey and wooded dunes, humid dune slack, dystrophic lake and pond, river, brook, *Molinia* meadow, hydrophilous tall herb community, wooded meadow, degraded raised bog still capable of natural regeneration, transition mire and quaking bog, spring, springfen, sandstone pavement, natural old and old broad-leaved forests, herb-rich forest with *Picea abies*, deciduous swamp woods, forest of screes and ravines, bog woodland, alluvial swamp wood, broad-leaved alluvial forest.

Species: hairy agrimony, marsh angelica, yellow marsh saxifrage, meadow gladiolus, perennial honesty, shining meadow rue; Baltic marsh, heath-spotted, lesser butterfly and early-marsh orchids; thick shelled river mussel, spined loach, salmon, river lamprey, barnacle goose; tundra and whooper swans; smew, velvet scoter, northern pintail, Eurasian curlew, whimbrel, ruff, European golden plover, little crane, wood sandpiper, common redshank, bar-tailed godwit, corncrake, white-tailed eagle, western marsh harrier; Ural, Tengmalm's and pygmy owls; hazel grouse, European nightjar, black stork, stock dove, black grouse, capercaillie, woodlark; great grey and red-backed shrikes; red-breasted flycatcher, pond bat, grey seal.

The nature reserve expands in a varied landscape: the sea with a jagged coastline, a beach ridge dating back the Littorina Sea 5,000 years ago, Estonia's highest dunes, expansive coastal meadows and bogs, different forest types. One of the reserve's key



Photo: Luitemaa, L. Lusik

values is its coastal meadows. The local population of the meadow gladiolus is one of the largest in Europe. The coastal meadows with low grass and the puddles with shallow water provide necessary habitats for several rare species, such as the natterjack toad, Baltic dunlin, ruff, black-tailed godwit, and common redshank. The coastal sea and meadows are perfect feeding and stop-over sites for water birds. Up to 15,000 barnacle geese and about 3,000 greater white-fronted geese and bean geese stop here on their migration routes. Bog pine forests, fen birch forests, as well as primeval, deciduous and alluvial forests grow in the damp and wet areas. About 500 species of plants and 263 species of birds, out of which 130 are breeding species, occur in Luitemaa.

Study trail. The Tolkuse Study Trail (2.2 km) starts at the car park on kilometre 162 on the Tallinn-Pärnu-Ikla Road, where you can find an information board with a map and explanations. The trail runs in the bog and on the dunes. Splendid views of the nature reserve and of the Gulf of Livonia open from the watching tower on Tornimägi Hill. www.rmke.ee

35. UULU COASTAL PINE FORESTS, SURJU COASTAL FORESTS, UULU-VÕISTE LIMITED CONSERVATION AREA (proposed LPA)

Location: Tahkuranna Rural Municipality

Area: 274 ha

Under protection since protected area 1958, limited conservation area since 2007

Habitats: wooded dune, natural old forest, herb-rich forest with *Picea abies*.

Species: Eurasian hobby, stock dove, hoopoe, black woodpecker, mistle thrush, woodlark.

The protected area lies on two sides of the Tallinn-Pärnu-Ikla Road. On the inlandward dunes, the Jõulumäe Pine Forests grow. The coastal landscapes and recreational forests, typical of South-West-Estonia, are preserved as permanent forests. The recreation area is well accessible and provides different facilities for resting and sporting.



Photo: Highland cattle on coastal meadow, M. Palginõmm

PÄRNU CITY AND SURROUNDINGS

36. NATURE RESERVE OF PÄRNU COASTAL MEADOW

Location: Pärnu City

Area: 371 ha

Under protection since 1958, under RP since 2007

Habitats: coastal lagoon, coastal meadow, white dune.

Species: soft hornwort, gibbous duckweed, white elm, shining meadow rue, woolly butterbur, marsh angelica, meadow gladiolus; fen, early-marsh, Baltic marsh and common spotted orchids; wild garlic, ruff.

The nature reserve consists of three detached plots of land. The areas are fully or partially flooded during storms. The coastal meadow is an important stop-over site for numerous species of migratory birds. The lapwing, common redshank, ringed plover, swans, ducks and several species of passerines nest and breed here. In order to restore and manage the habitats, the vegetation is mown and cattle graze here. Birds can be observed from the bird watching tower in the Old-Pärnu zone of the nature reserve on the right bank of the Pärnu River.

37. NIIDU LANDSCAPE PROTECTION AREA

Location: Pärnu City

Area: 84 ha

Under protection since 1958, under RP since 2007

Habitats: forest landscape, forest communities, wooded meadow, riverside meadow community.

Species: serin, tawny owl, stock dove, grey-headed woodpecker.

The forests here are of different ages, with several layers and numerous species. The age of the growing trees strikes with awe: the oaks are 100, the black alders 130, the lime trees 180 and the pines 150-200 years old. On the right bank of the Pärnu River, the protected area is crossed by the Olympic Champion Jüri Jaanson Health Trail, which provides good resting and sporting facilities.

38. PÄRNU LANDSCAPE PROTECTION AREA

Location: Pärnu City

Area: 516 ha

Under protection since 1958, under RP since 2007

Habitats: wooded dune, humid dune slack, natural old forest, herb-rich forest with *Picea abies*, deciduous swamp woods.

Species: fir clubmoss, common twayblade, broad-leaved helleborine, early-marsh orchid, honey buzzard, Ural owl, hazel grouse, European nightjar; grey-headed and black woodpeckers; woodlark, red-backed shrike, red-breasted flycatcher.

The protected area is a part of the forest landscape of Pärnu City's Green Belt. The city people love the area as a good berry and mushroom forest as well as a place for different sports events.

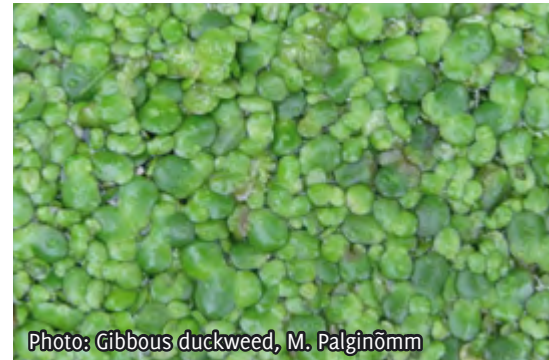


Photo: Gibbous duckweed, M. Palginõmm



Photo: Sand lizard, M.- L. Rebane



Photo: Shining meadow rue, J. Tenson

ERRATIC BOULDERS

The glaciers of the latest ice age brought erratic boulders to the territory of Estonia. When placing a boulder under protection, its natural value, measurements, location and connections with folk lore are taken into account. There are 22 erratic boulders under protection in Pärnumaa. However, the rocks here have quite moderate measurements.

The tallest and the largest rock – Võnnukivi, or Kalevipoja Vestitasku Rock (*Rock of Kalevipoeg's waistcoat pocket*) – is situated in the Pärnu River. The Soo-otsa Erratic Boulder, however, has the biggest girth. The Kotkakivi Rock (*Eagle's Rock*) lies in the centre of Manilaid Islet. A legend says that before the island was set there was just a rock in the sea, and an eagle used to sit on that boulder. The folk lore also knows many legends about the Estonian national hero Kalevipoeg and his enemy Old Heathen, which are connected with several erratic boulders.



Photo: Kotkakivi Rock (*Eagle's Rock*), M. Palginõmm



Photo: Riinu Lime, U. Lekk

TREES AND FOREST STANDS

In Pärnumaa, 39 trees and groups of trees of ten different species (oak, lime, pine, spruce, white elm, elm, birch, downy birch, grey alder, white alder) are under protection. The Panga Oak in Koonga Rural Municipality was the first to be placed under protection in 1936. The thickest oak with 635 cm in girth grows in Tõstamaa Rural Municipality. The thickest limes grow near the church of Mihkli. However, Pärnumaa's best known limes, called Kai, Mai and Riinu, have the form of wandering sisters in several legends. Unpretentious species of fungi, lichens, mosses, invertebrates, birds, and mammals live on and in the old primeval trees.

PARKS

As to parks, their historical structure, biodiversity, and natural and cultural heritage are protected. The main natural value of protected forest stands is the old primeval trees, which offer habitats to fungi, lichens, mosses, invertebrates, birds, and mammals. 32 parks have been placed under protection in Pärnumaa. The most remarkable and best known parks are at Audru, Pärnu City, Voltveti Manor, etc.



Photo: Kastna Oak, M. Palginõmm



Photo: L. Koidula Park, M. Palginõmm



Photo: Tolkuse Study Trail, M. Palginõmm

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Lekk, U., Kalda, T. Pärnu jõgi. Pärnu County Environmental Authority of Ministry of the Environment. Pärnu 2007.

LINKS

Information page of Estonian Nature Information System

EELIS: <http://loodus.keskkonnainfo.ee>

Environmental Board: www.keskkonnaamet.ee

Environmental Inspectorate: www.kki.ee, damage to environment: phone 1313

Estonian Environment Information Centre: www.keskkonnainfo.ee

State Forest Management Centre: www.rmk.ee

