



ECO NATURAL TREATMENT CENTRE - SUMMER CLINIC IN THE OPEN ON THE SEA - THALASSOTHERAPY ALONG QUEEN'S BEACH - NATURAL BOTANIC GARDEN

Peloid site – medicinal mud is located in the centre of Nin's Lagoon close to the longest sandy beach in Croatia, well known Queen's Beach. The site is located in a natural oasis of shallow, long and sandy coasts, far from industrial zones and isolated from direct traffic and main road routes.

Even the old Romans recognized therapeutic benefits of Nin's peloid on human health. Unearthed flues – round bricks used in baths for hot air circulation, and today exhibited in the Museum of Nin's Antiquities – are indicating its use in the Roman time. On the site of Punte the statue of Liburnian divinity Venus Ansotica from the 1st century was discovered. She represented a goddess of fertility and procreation so this might indicate that baths used to be in that area during the Prehistory and Roman time.

OUEEN'S BEACH - NATURAL BOTANIC GARDEN

Experts agree that complete area of Nin and its surroundings are unique landscape of rare plant and animal species with 8 NATURA 2000 habitats. Next to the Queen's Beach natural botanic garden with 4 NATURA 2000 habitats was formed:

- Posidonia beds (code 1120) are located in the shallow waters of the Nin Bay,
- Coastal lagoons (code 1150),
- Mediterranean and thermo-Atlantic halophilous scrubs (code 1420) with specific shrub plants, like sea purslane, golden samphire etc.,
- Sub-Mediterranean grasslands of the Molinio-Hordeion secalini (code 6540) with endemic and rare plants like peucedanum coriaceum, Dalmatian scilla, etc.¹







BIRD LIFE OF NIN'S LAGOON

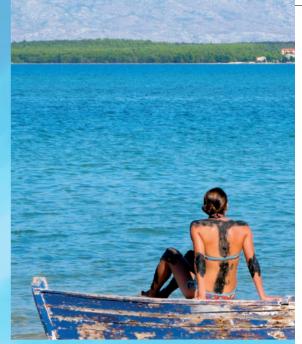
In Nin's Lagoon there are nesting, migrating and overwintering birds. Birds chose this area because vegetation of halophilous scrubs provides optimal conditions for bird types living in marshes. Bird watchers have the pleasure of watching specific bird species like rare Black-winged stilt (Himantopus himantopus) registered on the Red List of Threatened Species, Kentish Plover, Dotterel and others.²



MEDICINAL MUD

Among Nin's rich natural resources one of the most valuable is medicinal mud (liman, peloid) that's been healing and helping for decades.³ Slightly before the 1st World War peloid experts from Medical University of Vienna analysed Nin's medicinal mud and decided about constructing a health centre, unfortunately cancelled by war.⁴

Since 1960 the Academy of Medical Sciences in Zagreb registered Nin as thalassotherapy health centre and site of the sea peloid in the Northern Dalmatia with summer clinic in the open for peloid therapy. Department of physical medicine and rehabilitation of School of Medicine of University of Zagreb conducted researches of peloid sites in Nin's Lagoon couple of times (in 1968 and 1988). Nin is the biggest site of medicinal mud in Croatia, 120,000 m³ in size. Exceptionally high quantities of peloid and specific micro-climate of Nin's Lagoon enabled starting of organised therapy on the site back in 1965 and they continue also nowdays.



Application and Direction for Use

For almost 5 years medical staffs of Zadar's General Hospital organise and supervise the mud treatments for various disorders. Rehabilitation and mud wrapping is conducted in the Health centre of Nin during summer months: July and August, and occasionally in June and September. From the beginning of the clinic in the open archived database shows that more than 15,000 patients went through efficient therapy with Nin's medicinal mud.

Always fresh and high quality mud is extracted from natural environment and applied on the body. It consists of humus and minerals produced through century old natural process of dissolving of different plants by mixing fresh and salt water in the shallow lagoon.

The therapy starts in the morning hours with group exercises after which peloid is applied on a body. Then, in a pleasant natural ambient in the open, patients are sunbathing on a sandy beach for about 30 minutes, until the mud on a body dries. In the end the mud is rinsed and followed by swimming in the warm sea that prolongs the therapy. For increased effect the therapy is repeated twice a day. Peloid therapy lasts minimum 10 and up to 20 days. The effects of peloid are indicated through physical, mechanical and chemical reactions. Before usage of the medicinal mud it is recommended to consult medical staff that will guide you through the mud application, time for rinsing, multiple usages during the day and duration of the therapy.

Patients are coming to the organised Summer Clinic in the open on the site of Nin's mud with prepared illness documentation, and specialised care referral from general practitioner or physiatrist. Medical experts open a folder for every patient in which they write medical treatment course and do medical exam if necessary.

Indications for Application of Medicinal Mud (peloid):

- Functional disorders and illnesses of musculoskeletal system, rheumatic infections, metabolic bone diseases, rheumatism, different spine deformations and other problems that are consequence of musculoskeletal system defects.
- 2. Skin problems
- 3. Gynaecology it is good for gynaecology disorders and in treating women infertility
- 4. Aesthetic medicine for improving skin tonus and minimising cellulite.8

Contraindications: Peloid therapy should be avoid by people with pressure, heart and cardiovascular system problems. It is mandatory to consult a doctor before start and during the therapy.9

Medicinal mud – peloid – is used mainly for health reasons but also for fun or photography.

- ¹ Jasenka Topić and Joso Vukelić, *Priručnik za* određivanje kopnenih staništa u Hrvatskoj prema Direktivi o staništima EU, Državni zavod za zaštitu prirode, Zagreb, 2009.
- T. Nikolić, J. Topić. N. Vuković, *Botanički važna područja Hrvatske*, Školska knjiga, Zagreb, 2010, pages: 292 294.
- Tatjana Bakran-Petricioli, *Priručnik za* određivanje morskih staništa u Hrvatskoj prema Direktivi o staništima EU, Državni zavod za zaštitu prirode, Zagreb, 2011, pages: 27 29.
- ² Gordan Lukač, Vodič za promatranje ptica: Lokaliteti Paška blata i okolica Nina, Javna

- ustanova za upravljanje zaštićenim dijelovima prirode na području Zadarske županije, Zadar, 2010, page: 1.
- ³ Marija Dejanović, *Nin first capital of the Croats*, Nin, 2011, pages: 14, 16.
- ⁴ Želimir Maštrović, Nin budući centar zdravstvenog turizma, Med. Jad. 1990, 20, page: 283.
- ⁵ Goran Ivanišević, Natural health resorts in Croatia, Akademija medicinskih znanosti Hrvatske, Zagreb, 2008, pages: 24, 51, 54.
- ⁶ Ispitivanja peloidnih nalazišta u Ninskoj laguni, Zavod za fizikalnu medicinu i rehabilitaciju Medicinskog fakulteta Sveučilišta u Zagrebu,
- Zagreb, 1968, pages: 1 50; *Peloidna* nalazišta u Ninskoj laguni, sastav, svojstva, medicinska upotreba i indikacije, Zavod za fizikalnu medicinu i rehabilitaciju Medicinskog fakulteta Sveučilišta u Zagrebu, Zagreb, 1988, pages: 1 49.
- ⁷ Želimir Maštrović, Nin budući centar zdravstvenog turizma, Med. Jad. 1990, 20, page: 290.
- ⁸ Želimir Maštrović, Nin budući centar zdravstvenog turizma, Med. Jad. 1990, 20, page: 287; Oral statement by Neven Birkić on 9th March 2015.
- 9 Oral statement by Neven Birkić on 9th March 2015.



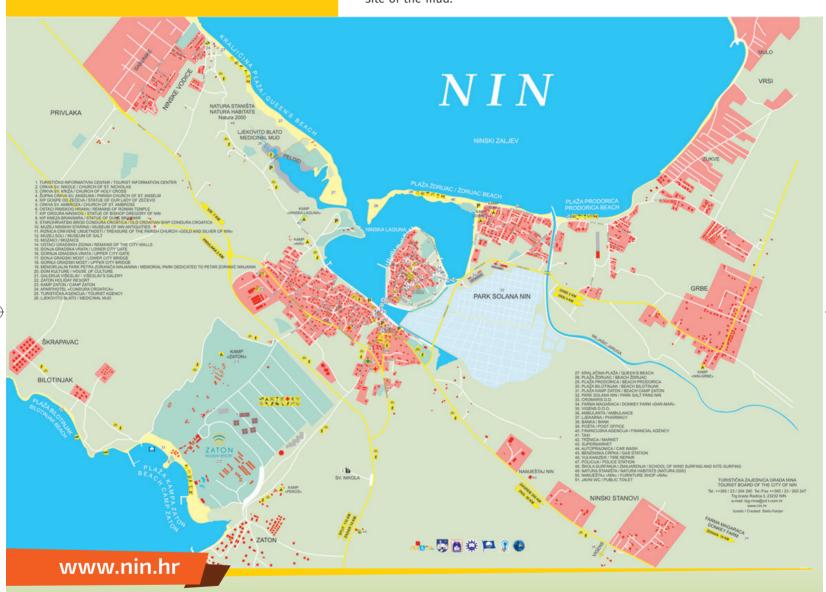
Useful information:

Recommendations: Medicinal mud should not be plundered along the beach because it loses medical properties and doesn't give positive effects by sun exposure.

Further information about the mud therapy in the Health Centre of Nin can be obtained by phone: +385 23 331 101 - Physiotherapy department of Zadar's General Hospital.



For those arriving by car in summer time there is paid parking by the site of the mud.



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Tourist Board of Nin tzg-nina@zd.t-com.hr





Ecological Tourism

Every year thousands of people, from which many minimised or completely cured their disorders, visit this place. Even though the efficiency of therapy with Nin's mud is not known to the wider public, according to the patients returning every year and increased interest there is high efficiency. Experts are not far from the opinion of the patients about its efficiency. Based on the therapy results collected through many years there is a plan for building a contemporary health tourism centre of Nin.¹⁰

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¹⁰ Želimir Maštrović, *Nin – budući centar zdravstvenog turizma*, Med. Jad. 1990, 20, pages: 283-293.