

EUROPEAN DIPLOMA HOLDING SITE

**IPOLYTARNOC FOSSILS
NATURE CONSERVATION AREA**

HUNGARY

EXTENDED ANNUAL REPORT

2019

FOR THE PERIOD

DECEMBER 1. 2018 - NOVEMBER 30. 2019

with focus on changes happened since the last renewal of 2010



State/Country : H U N G A R Y

The Protected Area:

Name: Ipolytarnoc Fossils Nature Conservation Area

Postal address: H- 3138 Ipolytarnoc Pf.1. Hungary

Tel/Facsimile: +36 32 454 188

Person responsible: Imre Szarvas

Email: szarvasi@bnpi.hu

Internet: <http://osmaradvanyok.hu>

Year of the award/Year of the last renewal/ Year until the award is renewed: 1995/2010/- 2020

Central authority concerned:

Name: Department of Nature Conservation, Ministry of Agriculture

Address: H-1055 Budapest, Kossuth tér 11. Hungary

Tel.:+36 1 795 2397

Fax:+36 1 795 0080

Person responsible: Érdiné Dr. Szekeres Rozália

Email: rozalia.szekeres.erdine@am.gov.hu

Internet: www.kormany.hu/en/ministry-of-agriculture, www.termeszetvedelem.hu

Authority responsible for its management:

Name: Bükk National Park Directorate (BNPD)

Postal address: H - 3301 Eger Pf.116. Hungary

Tel: +36 36 411 581

Fax: +36 36 412 791

Person responsible: Ms. Kálmánné Rónai director

Email: titkarsag@bnpi.hu

Internet: <http://www.bnpi.hu>

0. Preface:

The European Diploma to Ipolytarnóc Fossils is valid until 11 September 2020, and as a consequence, in accordance with the rules, only this year's report should have followed the extended version. But following the *de25e_2017_Areas_to_be_visited_2020* document, we realised that the on the spot revalidation appraisal would be in 2019. Since the field visit was expected to take place well before the recent report, we intended to give the revalidator some useful overview, that was why even the last year's summary had a focus on changes happened since the last renewal, and contained the brief, extended form of the report. This year's report sums up all of the previous remarks and has a common ground with the last year's one.

Professor Maurice Hoffmann was chosen to revalidate our Site, his mission took place between July 29 and August 1. His field visit gave a very constructive consultation opportunity for us, we were privileged and very grateful for his expertise exchange. We are waiting for his report, the experts' review and the oncoming decision about our Diploma renewal expected in September next year.

1. Conditions:

The Resolution CM/ResDip(2010)15 on the renewal of the European Diploma of Protected Areas awarded to the Ipolytarnóc Protected Area (Hungary) (Adopted by the Committee of Ministers on 16 September 2010 at the 1091st meeting of the Ministers' Deputies) renewed the Diploma to Ipolytarnoc Fossils until 11 September 2020. During the renewal no special conditions were specified.

2. Recommendations:

The Resolution CM/ResDip(2010)15 attached the following 5 recommendations to the renewal:

I. Recognizing the site's high potential for further discoveries of geological interest, research – especially the palaeontological excavations – should continue; all appropriate measures should be taken to preserve and, if possible, exhibit the natural resources; the results of scientific research should be made publicly available;

Action taken by the site to comply with the recommendation:

Research on the fossil footprints on the geological study trail has been going on, more than 40 vertebrate taxa have been identified so far. Lectures were given at scientific conferences and research papers were uploaded to the homepage of the site. Systematic brand management started to market as geotourism destination the site. To interpret the new discoveries of the Miocene habitat new animations were created and are in use in the high-tech interpretation as 4DX time travel simulation movie at the Visitor Centre and holographic projection at the Great Conservation Hall of the geological trail.

The GUIDE@HAND smartphone application got expanded and available in Slovak and English languages as well in offline format on our geotrail. The cellar building, which shelters the giant silicified pine is about to a new, stable get roofing, its construction started at the end of November this year, the old supporting structure got weakened, buckled a bit.

Developments since 2010:

Since 2010 several positive changes have happened in the recognition of the area's geological heritage. Partly these were instigated by the discoveries of new excavations, the fossil vertebrate taxa increased from 11 to at least 40, a roof was erected above the geotrail-side excavation and the rehabilitation of old protective buildings got started. The interpretation of palaeontological assets followed the new discoveries. And those are publicized through scientific articles and different social media platforms.

A new interpretative exhibition with augmented reality technology focusing on the Miocene habitat was established in the visitor centre this year.

II. The site should take an active role in the management of the Slovak-Hungarian transborder Novohrad-Nógrád Geopark, in order to preserve and interpret the natural assets of the region and to become a focal, multilingual information point for geotourism;

Action taken by the site to comply with the recommendation:

As the main gateway to the Novohrad-Nógrád Geopark, Ipolytarnoc promotes the geological heritage preservation of the region and advocates its resources to the visitors during special events, like the usual Geopark Week at the turn of May and provides exhibition place to the Geopark. The site hosted the spring meeting of the Hungarian Geopark Committee this year. The UNESCO experts, who revalidated the Geopark this summer, spent a half day at the Site, which heavily lobbied for the Geopark. The Ipolytarnóc guides have training about the Geopark's geological resources. The BNPD brand management extended its marketing including the Geopark's own website and programs since early spring this year, the cooperation got intensified between the two parties.

Developments since 2010:

The trans-boundary Novohrad-Nograd UNESCO Global Geopark -- with the essential endorsement of the BNPD -- became member of the European and Global Geoparks Networks in 2010. Unfortunately after that, at least for a while, the working relationship between the two sides worsened and the BNPD delegate was removed from the international relation staff of the Geopark.

Luckily, after management changes of the Geopark in 2016 the intercommunication became better, the Geopark got the UNESCO label in 2016 after the BNPD and the Geopark concluded a cooperation agreement, the BNPD delegate (the leader of Ipolytarnoc Fossils) has an influence again the international affairs of the Geopark, since that time the relationship between the two parties has gotten better, although still not the best.

The management structure of the geopark still excludes the nature conservation agencies in both countries. Although the BNPD could delegate one member to the EGN Coordination Committee, yet further restructuring is needed on leadership level. One solution would be a creation of a legal entity (European Grouping of Territorial Cooperation (EGTC)), which would enable regional authorities from different member states to participate in its management. Advanced investigation and further consultations started about this issue.

It is another related development since 2010 that the Global Geopark status as a new category was recognized by the UNESCO in 2015, and as a follow up the Government established the Hungarian Geopark Committee to endorse and control the initiative on national level, the BNPD as a member takes part in the Committee's work.

III. The entrance to the protected area should have an appropriate gateway displaying information in order to control tourism within the site and the buffer zone; the buildings along the geological trail should be further integrated into the landscape; the power line that runs between the village and the visitor centre should be replaced with an underground cable;

Action taken by the site to comply with the new recommendation:

Following the layout of the new brand new information panels got emplaced in front of the visitor center and at the border of Ipolytarnóc settlement this year, QR code and old Hungarian script alphabet are used in some places beside the more widespread Hungarian, Slovak and English languages.

Developments since 2010:

Luckily the buildings of the last 15 years well-fit in their surroundings, at the visitor center earthen cover was used, the temporary shelter protecting the new excavation and the chosen new roof cover of the protective cellar are good examples of these efforts. Unfortunately though, partly because of fire-protection restrictions, solutions for vegetation cover of the 40-26 year-old, buildings is very limited, they cannot be properly blended into the landscape in their recent conditions. Some of their structure aged and being aware of that, there are project plans targeting EU funds to erect landscape integrated and enlarged buildings in place of the old, industrial structures.

To control geo-tourism and lessen environmental impact of it on the whole territory it would be ideal to relocate the visitor reception facilities to the borderline, between the village and the protected area, these project proposals have failed so far. The same failure applies to the power line's replacement, nevertheless a project plan focuses on underground cable laying. The BNPD is constantly applying and lobbying for funds to achieve these goals.

IV. The gradual replacement of the exotic trees with indigenous species should be continued by assisting the natural succession process through ecologically sensitive land management practices; the control of game – causing considerable damage to vegetation and protected animal species – should be continued;

Action taken by the site to comply with the recommendation:

Minor forestry activity focused on the rehabilitation of old orchards, enhanced the spreading of indigenous tree species and suppressed exotic species, including the elimination of invasive ragweed this year. Sensitive game management is an ongoing activity throughout the year, the ranger of the site is responsible for it with the assistance of the staff of the BNPD headquarters.

Developments since 2010:

A larger scale forestry activity has been going on covering some 10 hectares since the last decade, where the former acacia forest section's transformation by indigenous tree samplings is going well, although fencing had to be introduced to prevent game over-browsing. Game management is an ongoing activity every year, since the whole area is a long-term, specially designated hunting area, where demands of nature protection take priority, managed by the BNPD.

To demonstrate these activities to the widest audience a family friendly new high-tech exhibition and movie was created this late autumn, as a side project of the 2021 Budapest World Hunting and Nature Exhibition under the motto ““One with Nature””.

These are presented at the visitor centre and to promote this project an Ipolytarnóc hunting road-show is under way in the main settlements of Northern Hungary right now, till the middle of this December.

V. The balance between open spaces and wooded areas on the western side of the conservation area, close to the nearby settlement, should be maintained to preserve the mosaic structure of the landscapes there;

Action taken by the site to comply with the recommendation:

Since last year the focus on the racka sheep breeding changed and most of the sheep flock was moved to another area of the BNPD, the sheep grazing had just a small impact on maintaining the sparse, mosaic-like structure of habitats inside the area, mainly narrow gauge tractors helped it with hay cutting. At the buffer zone, where the meadows are leased to local farmers, grazing, hay cutting and bailing activities happened on a larger scale. In the meadows of the border zone the pine tree and acacia spreading have been suppressed by the help of a local NGO.

Developments since 2010:

Constant and effective animal husbandry, sheep grazing and hay cutting activities managed the mosaic-like structure of open spaces with forested areas at the buffer zone of the Fossils, the meadows have been leased to local farmers there. In the border zone tree thinning on forest edges has maintained the mixed vegetation cover of the landscape. Around buildings of the geological trail acacia was suppressed. But in some places natural succession has taken place.

3. Site Management:

The BNPD provides leadership and specialists' expertise from the Headquarters to the site. The mid-term contract for leasing the Visitor Centre to a company was terminated with mutual consent last summer, the BNPD took back the operation of the building. Since that time the BNPD with the help of a local NGO (TETT Foundation) employs the workers. The new leader of the ecotourism department of the headquarters endorsed the site, introduced professional brand management and marketing tools, which proved to be very successful, the income from tourism increased. That fact of the balanced result helped stabilizing the number of local workers, the large-scale governmental staff reduction, which badly hit nature conservation this year has not seriously affected the area.

Right now 11 people are employed by the BNPD with permanent or long-term contracts and 11 people are employed by an NGO, to do year-long maintenance and service at the site. The personnel enlargement is a welcome, huge development to ensure effective long-term management goals.

The Fossils provided a year-long seasonal work opportunity for the locally unemployed for public service as well, but luckily the importance of this help lessened. Only 2 people are employed in this category by the local NGO to do maintenance mainly at the Miocene forest part of the Site.

Two students had summer seasonal work during the weekends helping guidance and interpretation.

To compare the welcomed huge changes in the structure:

In 2010 the BNPD had only 3 people as permanent staff and the company, who at that time run the visitor center had 7 people. All the other 18 people were employed only as ad hoc seasonal workers through the regional unemployment office at that time.

4. Boundaries:

The area has stable boundaries, its buffer and core zones are well defined.

5. Other information:

VIP visitors are frequent at the site, due to its prestige important meetings are held there, the significance of the European Diploma is well recognized. The logo of the Diploma is on all the publications, road signs and panels of the Ipolytarnóc Fossils, a flag with the Diploma emblem is in front of the Visitor Centre, the visibility is well maintained.

The media attention has been focusing on the new fossil footprint discoveries. Drone photos were taken to monitor vegetation changes of the site.

Professor Maurice Hoffmann's on the spot appraisal was followed by the media's attention, this occasion also increased the visibility of the site.

6. Natural heritage (general abiotic description: geomorphology, geology and hydrogeology, habitats, flora, fauna, landscape) – State of conservation

6.1. Environment: changes or deterioration in the environment, of natural or anthropic origin, accidental or permanent, actual or anticipated

The Ipolytarnoc Fossils Nature Conservation Area protects a globally unique heritage of the Earth's history. As a kind of Prehistoric Pompeii, it represents an exceptionally well preserved Lower Miocene palaeohabitat due to a sheltering volcanic catastrophe that happened, according to the newest radiometric measurements, some 17 million years ago. Tectonics and natural erosion exposed the fossiliferous strata to the surface, fossil finds from outcrops instigated scientific excavations. Some minor scale damage on fossils is, unfortunately, part of natural processes. To lessen the loss, constant saving surveillance monitors the ravines of the area. Some extreme weather conditions, heavy, torrent rain could cause landslides in every 4-6 years, some captured groundwater springs dried out during the last decade. These changes can keep on as a prediction in the future as well.

6.2. Flora and vegetation: changes in the plant population and in the vegetation cover; presumed causes

Natural succession has been taking place in some of the forest-meadow edges on the eastern area. Forestry activity controls the spread of exotic acacia and meadow maintenance suppresses invasive plants. The spreading of indigenous plant species has increased since 2010, but old artificial plantations still dominate the vegetation of the area.

6.3. Fauna: changes in the sedentary or migratory populations; congregating, egg-laying and breeding grounds

The area is a kind of wildlife refuge belonging to the ecological corridor of the state border's green belt. Because of habitat protection the biodiversity is increasing, getting richer than in the neighborhood. The biodiversity benefited from the creation of new wetland habitats in the Miocene forest as well in the last decade.

7. Cultural heritage and socio-economic context

7.1. Cultural heritage

Intangible cultural assets are worth mentioning within the confines of the area, concerning the 2 century-long history of scientific research. There are panels commemorating famous scientists' contributions to the knowledge of the site. Some repeated annual events, like the Volcano Day during European Geoparks Week slowly create their own traditions.

7.2. Socio-economic context

The tourism of the site provides more and more jobs for the local people, local agricultural produce and handcraft is sold in the gift shop of the visitor center, and special market days organized by the site expose the visitors to the folklore of the Paloc ethnic group, inhabiting the region. Due to extended programs of the area more and more visitors stay overnight in local accommodations. Since the site promotes the natural and cultural resources of the whole Novohrad-Nógrád Geopark, it takes an active role in the transborder development, local enterprises profit from the tourism of the site

8. Education and scientific interest

8.1. Visitors – Information policy

The tourism developments of the "Prehistoric Pompeii" of the last decade has proved to be successful, the new facilities and educational programs function well. Since last year new brand management and marketing tools were introduced increasing the effectiveness of information. The site's home page got restructured, got linked in synergy to the home pages of the BNPD and the Geopark. The website is constantly updated, and it is an effective on-line tool to inform the public about changes and developments, it is linked to different social media platforms as well. Ipolytarnoc is the main gateway to the Novohrad-Nógrád Geopark, as a focal point, it provides information about the region as well. Visitor outreach is multifaceted, including advertisements, presentations on different travel and educational expos all around the country. As a new marketing tool, a Miocene Park profile is promoted.

Due to the increased interests and new developments the touristic season got extended till the middle of November. And from this year on, during weekends from Fridays to Sundays the Site is open in winter. Although the trail network is mainly not accessible during winter time, but the new exhibitions and special thematic tours can provide several hour's programs for the families, new high-tech interactive exhibitions may attract visitors to the visitor centre's area.

One of the purposes of the new projects were to find profitable means to keep the staff even during offseason by interesting new services.

Concerning statistics, the annual visitor number at the site was 57 thousand people in 2010, which number decreased for a while to the bottom of 42 thousand, but expected to reach above 67 thousand by the end of this year. More and more visitors come to the site from Slovakia.

Vandalism exists, but on minor level, littering is not insignificant and selective waste collection, despite signs, is not typical among the visitors.

8.2. Scientific research

The fossiliferous localities have been constantly monitored, low-scale new excavations along fossil track ways discovered reptile and amphibian fossil taxa beside the more common mammals and birds. The fossils are stored in the fossil-depository wing of the research house. Studies on the volcanism, which destroyed the habitat is an ongoing scientific work involving Hungarian and Slovak experts alike. Scientific papers are put on the home page, to make them accessible to the interested. The site's resources and assets can provide diverse topics to several university theses each year.

Yet during the revalidation mission the topic was recognized: more efforts would be useful to extend field research by involving international expertise, the site has the potential for it.

More details are available under Chapter 2 of this report.

9. Site description (vulnerability, protection status, ownership, documentation)

The territory of the whole site is state property, a protected nature reserve, its inner core got state protection in 1944. It is a nature conservation area, which is managed by the BNPD. No changes in ownership title are expected.

10. Site management (management plans, budget and personnel)

10.1. Improvements made

Since 2010 the site's basic touristic facilities have been enhanced and constantly developed. The old protective buildings and some infrastructure, outdoor wooden furniture and bridges deteriorated a bit, needing rehabilitation and mending. The BNPD has the budget for the basic maintenance.

10.1.1. Ecological action affecting the flora and biotopes; controls of fauna

Ecological actions have been taken to rehabilitate natural vegetation and suppress invasive plant species by forestry activities. The site itself is a specially designated hunting area, where sensitive and controlled game management is the responsibility of the BNPD.

10.1.2. Protection against the elements (fire, water regime)

Protection against fire complies with the disaster regulations and directives, the buildings are insured and monitored with fire alarm systems. The forest edges as fire zones around the exhibition buildings of the geological path are constantly cleared. The buildings are protected by constantly maintained ditches and a drainage system against flood. The maintained wetland habitats function as temporary water reservoirs for flood preventions to the nearby village.

10.1.3. Approaches and thoroughfares (paths, roads, car parks, signposting, fencing, etc.)

Concerning approaches and thoroughfares, the site is connected with a dead-end to the national road system, it has a parking lot, with the capacity of 10 busses and 50 cars,

when needed temporarily side road parking can be introduced. 5 study paths build up the area's touristic trail network, a bike path runs along the state border.

The old inner fence system was terminated to enhance migratory pathways. Some connected dirt roads got blocked by barrier in order to stop intruding traffic with unauthorized vehicles. New signposts inform the visitors.

10.1.4. Field equipment (hides and study facilities)

The site's warden got some new tools, some high-stands became renovated, and hidden game cameras were placed out to monitor the presence of top predators. Fossil conservation material was bought.

10.1.5. Waste management

Selective waste collection is taking place with designated containers at the site in cooperation with the town management company, which collects waste in the region. Organic matter is composted.

10.1.6. Use of renewable energy systems

The usage of alternative energy for the new buildings was priority during the developments, partly to achieve low operating costs and partly because of the site's mission in the spreading of environmental-awareness. Such are heat pumps using the geothermal energy in three buildings of the site and solar panels to gain hot water. New plans were drafted for solar cells to position on top of buildings to gain electricity. Firewood of the felled acacia is used in tile stoves. An electric filling station was established next to the visitor center this autumn to attract electric cars to the site.

10.2. Management

The site is managed by the BNPD, which is the regional nature conservation agency, the legal entity behind the operation of the area. The BNPD employs the local staff and controls the activity of other organizations working at the area. The structure and changes on human resources of the site management are more detailed in Chapter 3 of this report.

10.2.1. Administrative department: changes made

Look for details in Chapter 3.

10.2.2. Wardens' department: changes made

There is one ranger stationed in the area, the former other ranger was transferred to other status. The rangers is a representative of law enforcement can control tourism impact and behavior when it endangers protected natural assets even beyond the confines of the site. Yet their main activities are strongly linked to the nature reserve. One of the rangers is expected to transfer to the Ecotourism Department and his ranger status will be emplaced elsewhere within a year according to plans.

10.2.3.- 4. Internal policing measures, infringement of regulations and damage; legal action

Illegal tree cutting and firewood theft happened several time on the forest part edge of the site in the past, against the local perpetrators police and judicial procedures were conducted, but in the last couple of years luckily no such case happened.

11. Influence of the award of the European Diploma for Protected Areas

The public and media are using the title of the Diploma as part of the image of the site. The award and the recommendations of the European Council give additional support for the implementation of the area's management plan in order to that the Fossils could comply with its mission statement. Altogether the Diploma label has been used in good effects, it has contributed to the success, when the BNPI applied for funds to accomplish the last decade's new developments.