COMPLEXUL MUZEAL DE ŞTIINŢELE NATURII „ION BORCEA” BACĂU

STUDII ŞI COMUNICĂRI 2019	Vol. 28: 62 - 67

A LOST WORLD – TEMPORARY EXHIBITION

DANIEL MAFTEI, SORIN ROŞU, DANIEL GHIURCĂ, DALIA PARASCHIV, IRINA-MĂDĂLINA ARDEI, OTILIA-CARMEN PAVEL*

ABSTRACT

The temporary exhibition ”A lost world” organized at the Natural Science Museum subunit of the Natural Science Museum Complex ”Ion Borcea”, Bacău, has opened for visitors since December 2018. The exhibition brings forth to the audience various aspects concerning the formation of the Earth and also the diversity of the species which populated it in the geological past. Thus, in the exhibition over 100 fossil samples are presented. The visitors can admire natural-sized reproductions of several prehistoric animals such as: *Kelenken guillermoi* - a gigantic bird which populated the Earth 15 million years ago, *Australovenator wintonensis* – a dinosaur which populated the Earth 95 million years ago or *Pterygotus anglicus* - a gigantic arthropod which lived 400 million years ago. Those interested can step on a geological time stairway, being able to identify representatives of various geological eras. The exhibition was organized in partnership with specialists from the Faculty of Geography and Geology, the Faculty of Biology in the ”Al. I. Cuza” University of Iași and from the Natural History Museum of Iași.

Key words: fossils, dinosaur, exhibition, museum

Introduction

The cultural and exhibitional project ”A lost world” began in 2016, aiming to call public attention on various aspects related to the formation of the Earth and on the diversity of the species which populated it in the geological past. The present living world means less than 1% of the total number of species that have ever appeared on our planet until now. Thus more than 99% of the species ever living on Earth have completely disappeared. Now over 19.000 plant species and 5.000 animal species on Earth are classified as being on the brink of extinction. Some other thousands of species reach this status every year, just before being identified by the biologists. Like the individuals, species evolve and then die. This process is part of the natural life cycle. Nevertheless, it seems that the rhythm of extinction brutally accelerated in the last centuries, respectively in the last decades. Our planet is on its way of beginning a phase of mass extinction, often called ”the sixth extinction”, which simultaneously takes the shape of a disorder and of a living world impoverishment (2,7,9). On one hand the exhibition warns against the species periclitation and on the other hand wants to spread the knowledge about the extinction of several important species in our planet’s geological past. The exhibition positively responds to the request of a large number of our visitors.

Objectives

- the capitalization of the museum patrimony;
- the offering of information to the public regarding the paleontological collection of the Museum Complex ”Ion Borcea”, Bacău
- the enrichment of our public’s knowledge regarding the existence of various species in our planet’s geological past;
- the presentation of various theories regarding the extinction of some species in the course of time.

Material and methods

The achievement of the temporary exhibition involved several specific activities which took place between 2016-2018:

- proposing / editing the theme project;
- achieving the technical project;
- listing the authentic exhibits and then selecting them from the paleontological collection of The Museum Complex of Natural Sciences”Ion Borcea” Bacău;
- coworking with experts from the Faculty of Geography and Geology, the Faculty of Biology of the ”Alexandru Ioan Cuza” University of Iași (Conf. Dr. Paul Țibuleac and Conf. Dr. Ion Cojocaru) in order to select and to take the necessary exhibits;
- restoring several exhibits;
- buying / assembling some representative exhibits;
- making the auxiliary and complementary exhibits: panels, labels, moulds, interactive applications etc.;
- assembling the exhibition according to the technical project;
- making the cultural marketing materials (flyers, banner, invitation);
- making the exhibition file.

* "Ion Borcea" Natural Science Museum Complex, Bacău, Romania, e-mail: daniel_ioan_maftei@yahoo.com

Results and discussions

The exhibitions has 5 compartments in which the evolution of life is shown:

1. Living in the distant past
2. Living in the Paleozoic
3. Living in the Mezozoic
4. Living in the Cenozoic
5. The origin and evolution of humans

Each part of the exhibition includes a 1000X2000 cm information panel, fossil samples illustrating each geological era, moulds and natural-sized replicas of some prehistorical animals (figure 1). Visitors can notice the phases of the fossilisation process through authentic exhibits and also can learn how coal and petroleum (figure 2).

Over 100 fossil samples are exhibited, of which: *Paradoxides bohemicus* – trilobites (sea arthropodes which are extinct 250 million years ago), *Choerolophodon anatolicus* (which is extinct 5,3 million years ago), *Ursus spaelaeus* – cave bear (which is extinct 27800 years ago), *Mammuthus primigenius* – the woolly mammoth (which is extinct approximatively 3000 years ago) etc. (figure 3).

Visitors can admire natural-sized replicas of some prehistorical animals such as *Kelenken guillermoi* – a giant bird which lived 15 million years ago or *Pterygotus anglicus* – a giant arthropode which lived 400 million years ago (figure 4). Also visitors can discover the fascinating dinosaur world, admiring some dinosaur species reconstruction - *Australovenator wintonensis* (which lived 95 million years ago) or *Tyrannosaurus rex* (which lived 65-68 million years ago) (figure 5).

Those interested are invited to step on a geological time scale of our planet, being thus given the chance to identify representatives of various geological eras (figure 6) (5,6,8,10,11).

Within this exhibition 3 interactive applications for touchscreen were developed (1,3,4):

1. Earth structure
2. Continent and ocean formation
3. Human evolution

→ Earth structure: within this application we explained the Earth's concentrical strata structure. The outer part presented the solid Earth crust making both the dry land and the sea and ocean bed, then the next thickest stratum i.e. the mantle extending down to 2.885 m depth and finally the centre of the Earth i.e. the core, which is made up of two parts: an outer layer, the so-called liquid outer core and a solid inner core (figure 7).

→ Continent and ocean formation: within this application we presented data regarding the dry soil masses through the movements of the tectonic plates along the geological eras in millions of years and also regarding the characteristics the relief and climate of each geological periods. The application also shows that this movement led to the separation and to the junction of the dry soil areas and to the present-day continent formation (figure 8).

→ Human evolution: within this application we presented data regarding the place of living, when he lived, but also information regarding the body structure, the physical appearance, the tools, the nutrition of each hominid species (accepted by the majority of scholars) (figure 9).

Conclusions

The theme of the exhibition aimed to show the visitors a world which disappeared millions years ago and also to show the audience little-known aspects in every geological era. Furthermore we seized the opportunity of exposing highly valuable pieces taken from the paleontological collection of The Museum Complex of Natural Sciences "Ion Borcea" Bacău.

Acknowledgements

We express our gratitude to the management of the "Al. I. Cuza" University of Iași, to the Natural History Museum of Iași, to Conf. Dr. Paul Țibuleac and to Conf. Dr. Ion Cojocaru for their scientifical and material support.

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Fig. 1 - Info panels

Fig. 2 - Fossilisation /coal and petroleum formation

Fig. 3 - Fossil samples

Fig. 4 - Natural-sized replicas of prehistoric animals

TYRANNOSAURUS REX (OSBORN, 1905)
RECONSTITUIRE LA SCARA DE 1:4,5 DE ION COJOCARU ŞI ALEXANDRU BUZURIN,

AUSTRALOVENATOR (HOCKNULL ET AL., 2009)
RECONSTITUIRE ÎN MĂRIME NATURALĂ DE DIANA RĂU ŞI RADU FIRICEL,

Fig. 5 - Dinosaur species reconstructions

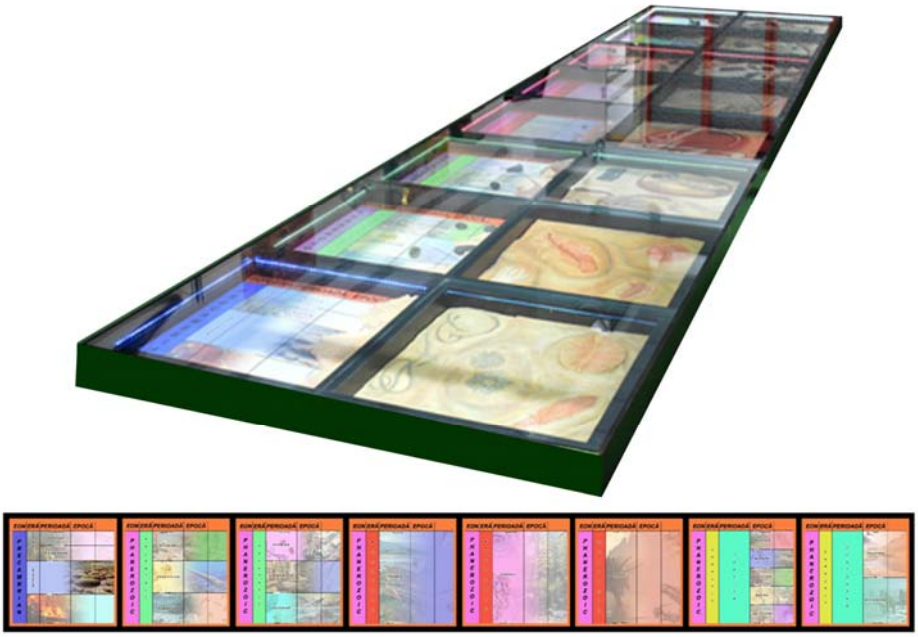

Fig. 6 - Geological evolution scale

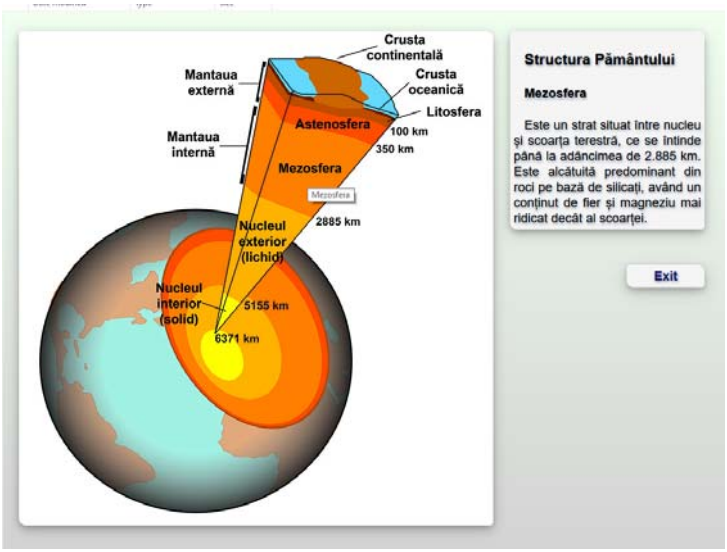

Fig. 7 - Interactive application – Earth structure

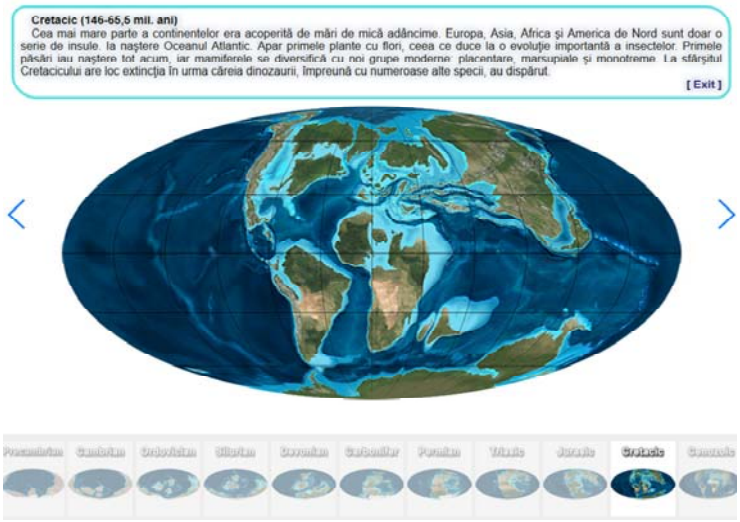

Fig. 8 - Interactive application - Continent and ocean formation

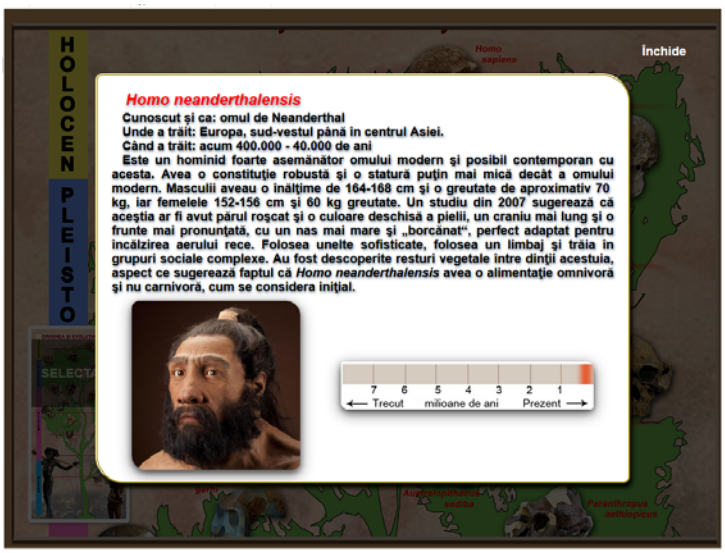

Fig. 9 - Interactive application – Human evolution