

“DR. FAWAZ AZKI” GEOLOGICAL MUSEUM, KISMIN – LATTAKIA, SYRIA – WORLD HERITAJE; ITS ROLE IN THE DEVELOPMENT OF SCIENCE AND ENVIRONMENTAL EDUCATION WORLDWIDE

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Abstract. “Dr. Fawaz Azki” Geological Museum is located in Kismin Village - Lattakia District, Lattakia Governorate - Syria. It is the only museum of its kind in the Syrian Arab Republic and the first museum of geology established in the Middle East. There is on the UNESCO list and GoogleEarth. This paper is a description of the museum. However, the work is intended as an overview of the educational and scientific activities carried out under it, from its creation until today (2014).

Keywords: geological museum, scientific research, ecological education.

Rezumat. Muzeul de geologie „Dr. Fawaz Azki”, Kismin – Lattakia, Siria – patrimoniu mondial; rolul său în dezvoltarea științei și educației ecologice pe glob. Muzeul de Geologie “Dr Fawaz Azki” este situat în Satul Kismin – Județul Lattakia, Guvernoratul Lattakia - Siria. Este unicul muzeu de acest gen din Republica Arabă Siriană și primul muzeu de geologie înființat în Orientul Mijlociu. Se află pe lista UNESCO și pe GoogleEarth. Lucrarea reprezintă o descriere a muzeului. Totodată, se dorește a fi o privire de ansamblu a activităților științifice și educative desfășurate în cadrul acestuia, de la înființarea sa și până în prezent (2014).

Cuvinte cheie: muzeu de geologie, cercetare științifică, educație ecologică.

INTRODUCTION

The “Dr Fawaz Azki” Geological Museum was opened in July 2002. It is the only private museum in Syria, arranged in the grandparents` house of the geologist (AL-AZKI, 2011; 2014a).

The museum is located about 20 km from the Lattakia Town, in the west of the Kismin Village.

Kismin Village is located in the north-eastern part of Latakia City (Latakiah, often locally transliterated as Lattakia), in Lattakia Mountains - coastal mountains disposed parallel to the Syrian Mediterranean coast.

Kismin Village (also named Kesmin, Kesmine, Kasmin, Qasmin, Qasmine, Qosmine, Masmin) is divided in two parts by Mashqita Lake. It shows forested limestone ribs, with altitudes between 100 and 300 m that descends gently toward the lake.



Figure 1. Earth map (from Google Earth, accessed: March 24, 2014) emphasizing the position of Syria in the Middle East – Asia.

DISCUSSIONS

The “Dr. Fawaz Azki” Geological Museum (35°38'00.62`N, 35°54'20.68`E) - Kismin Village (35°37'56.85`N, 35°54'43.09`E) (Figs. 1; 2a, b; 3), part of the scientific and cultural heritage of Syrian Arab Republic, is the rarest museum in Syria. It was opened after the completing our own research in the coastal mountains series of Syria. It

consists of two parts: the Open-Air Museum and the Closed Museum (Museum Building) (AL-AZKI, 2012c; AL-AZKI, 2014b; MGSREE, 2014).

The Open-Air Museum (Fig. 4), spread over 1.500 m², is located in the courtyard of the museum. Here, there are over 60 rock samples of huge size (between 50-200 cm and 75-1.500 tons) which are the dominant rocks in Syria.

Also, in the Open-Air Museum, there are samples of dinosaur species in their natural size: a herbivorous dinosaur from the Jurassic (with a height of 7 m and a length of 23 m), a carnivorous dinosaur from the Cretaceous time (with a height of 3 m and a length of 5 m) and a flying dinosaur with a length of 4 m.

Also in the Open-Air Museum, there is the reply of a volcano in Qatar. The entrance is through a gate located at its base. Inside the volcano, there are six samples of different depths volcanoes, over 30 km, and a copy of the internal structure of the Earth.

In the Open-Air Museum, there are the 3D geological map of Syria, 330 cm, and a reply of the Earth Globe with a diameter of 2 m.

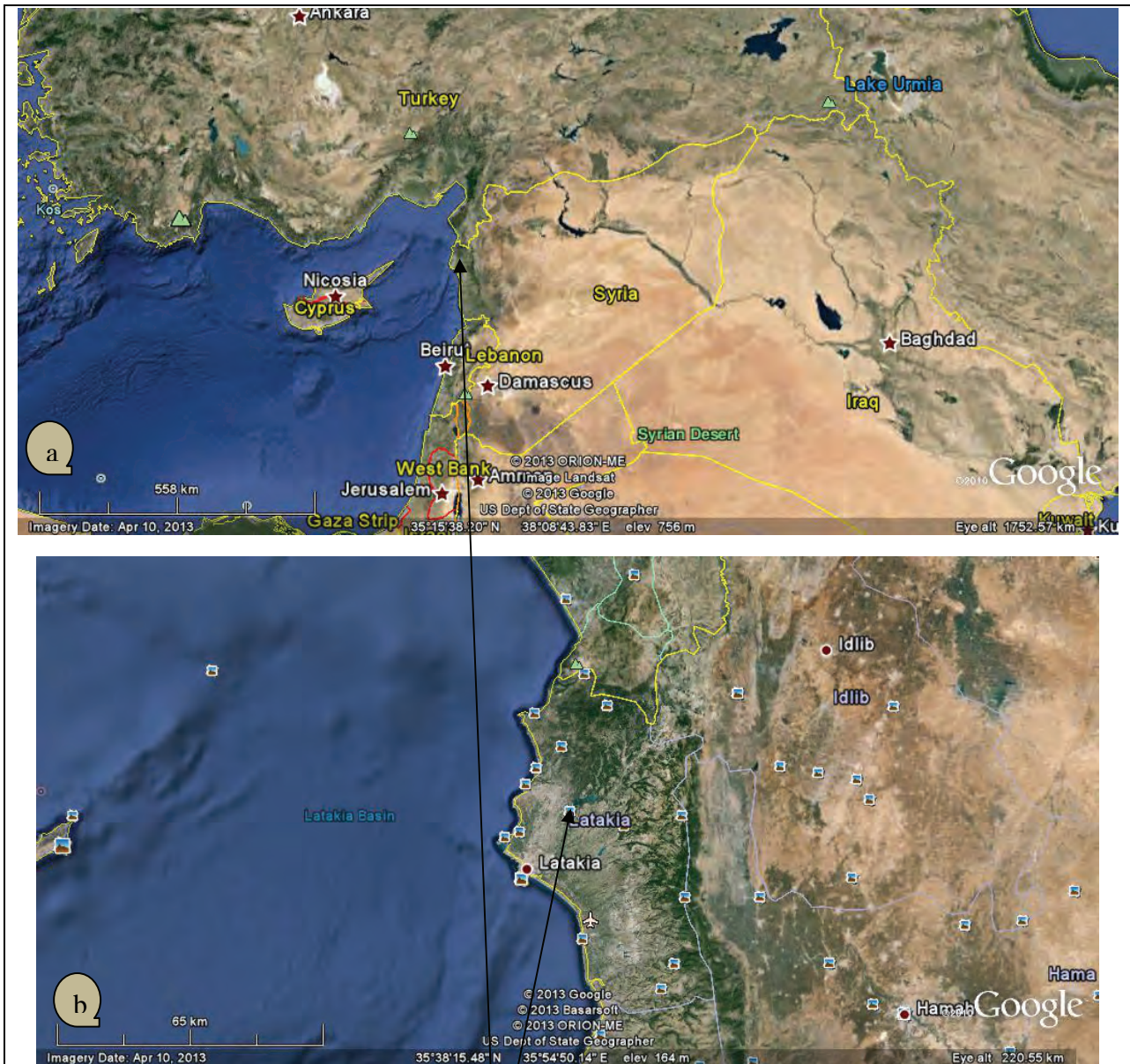


Figure 2. Geographical position of Kismin Village in Lattakia Mountains (image from Google Earth, accessed: March 4, 2014).

The Museum Building (Fig. 5), spread over 130 m², is built in the Syrian architectural style from boulders brought from Lattakia Mountains (35°29'21.76" N, 41°25'58.97" E), and covered only with stones. It is divided into seven sections.

1. The Fossils Section (“mosthathat” in Arabic) has a circular shape; on this roof, there is a starfish, as hologram (the symbol of the Syrian “Ilmsthatat”). It houses more than 120 fossils found on the whole territory of Syria and other parts of the world. The museum houses a beautiful collection of microorganisms, plants, invertebrates

(mollusks, etc.) and vertebrates (dinosaur embryos in open eggs and adult specimens of dinosaurs) fossils, collected and classified - all the fossils discovered in Syria; they are placed in wooden boxes fitted with window for viewing (AL-AZKI & AXINI 2012a, b).

2. Minerals Section has a prismatic form (quartz crystal system), on top of which it is written in stone SiO_2 (chemical formula of quartz – the symbol of the Syrian mineral). This section houses over 100 kinds of minerals and ores, representing all the minerals of Syria and in the world.

3. Innate Geology Section is built in the shape of a hemisphere. It includes a collection of some rock tools (by clay, basalt, onyx, sandstone, etc.) which are handmade by ancient Syrian peoples – Syrian cultural heritage pieces.

4. Black Hole Section is a lobby with curved roof. It is a cosmic black hole which makes the transition to the fifth section.

5. Cave Section shows the types of caves within the territory of Syria. It includes Stalagmites and Stalactites.

6. Rocks Section accommodates all existing rocks in Syria and the other regions of the worlds - sedimentary, magmatic and metamorphic rocks.

7. Seventh Section includes the library, the maps and epitomes hall, the research laboratory of the museum and administrative halls.

The Museum Library includes more than 1000 scientific papers in Arabic, Romanian, English and French languages.

The Maps and Epitomes Hall houses many geological charts and maps for Syria, the most ancient and important of which is the one drawn in 1945, and many representations of the tectonic phenomena.

The research laboratory houses samples of raw materials. Here, samples are examined and cut.

In October 2007, on the roof of the museum, it was founded the first and unique Astronomical Observatory in Syria.

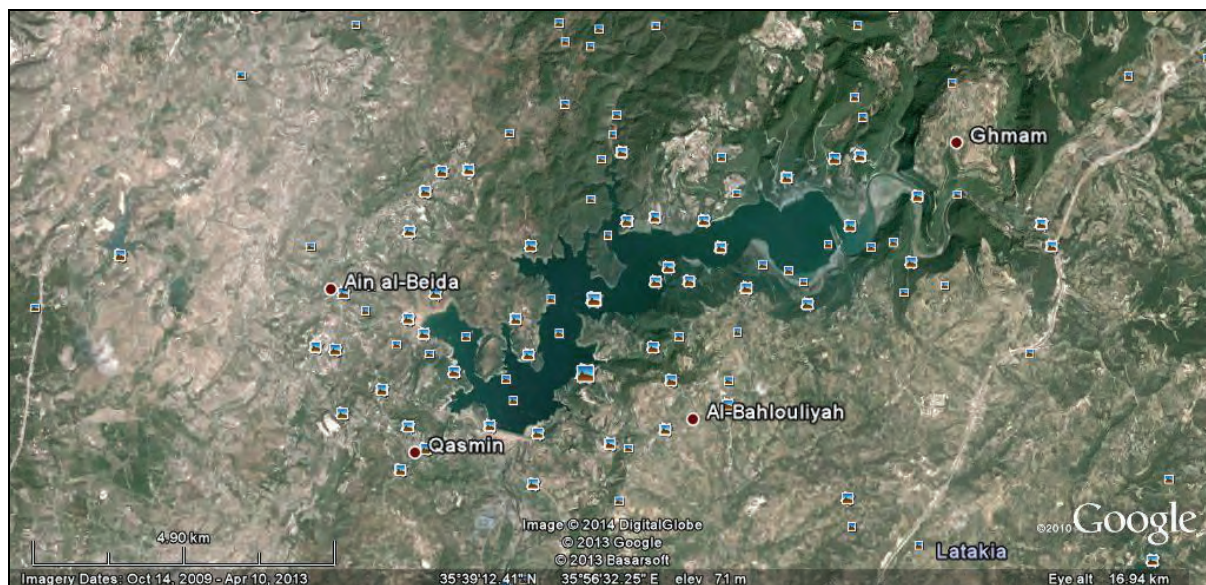


Figure 3. “Dr Fawaz Azki” Geological Museum in Kismin Village (from Google Earth, accessed: March 4, 2014).

Since 2002 until now, in the museum there were conducted several research programs and projects on education, culture, tourism, alone or in collaboration with various scientific research, educational or cultural institutions in Syria or abroad.

In the museum laboratory, there were conducted numerous research projects that focused on field and laboratory research. Here, numerous research on palaeo-diversity/palaeo-ecology and zoo-archaeology of Syria were held: research on the origin and evolution of man; methods of conservation and protection of nature (bio- and geo-diversity) of the ancestral population of the current territory of Syria; perception of primitive man on climate change; research of dinosaur fossils discovered in marine and continental sediments belonging to the Late Cretaceous and the Middle Jurassic of Lattakia Mountains, Syria (AL-AZKI, 2013; AL-AZKI & AXINI, 2013).

Also, in the museum, there were held research studies on fossils species diversity identified across Syria and the Mediterranean coast (AL-AZKI, 2012a, b). Here, there were conducted hydro-geology, geophysics, climate change and global warming, environment pollution, etc. research studies.

On the basis of this research, there were gathered the fossils, rocks and minerals species and stone tools discovered within the territory of Syria, and existing in the museum sections.

The best results of this research were presented in various scientific events, and subsequently published in scientific journals – national (Syria/Romania) and international.



Figure 4. Overview from the Open-Air Museum (original).



Figure 5. Entrance to the Museum Building (original).

The museum organizes the International Scientific Symposium *Bio-diversity Conservation “in situ” and “ex situ”* (BCIS) / International Scientific Symposium *Geo-and Bio-diversity Conservation “in situ” and “ex situ”* (GBCIS), and it is the international partner of the educational program named DESAME (Day of Earth Sciences in Africa and Middle East).

From the beginning until now, the museum has been a partner of many cultural and tourist programs, and its activities represent an example to follow (DMA-UPD, 2011a, b).

In the museum (the open-air museum or the closed museum), many educational projects with pupils and students were held (Figs. 6a, b). During scientific or educational lectures, the visitors of the museum (pupils, students, etc.) can listen or take notes on specially designated banks in the museum courtyard with 80 stay places.

From the beginning until present, in the Astronomical Observatory, there have been made astronomical observations both scientific and educational – the last achieved by various visitors of the museum, eager to know the Universe (Fig. 7).

From 2002 until now, the museum and hence the observatory was visited by over 74,000 visitors, of all ages and professions, from Syria and abroad – the museum being on the list of the tourist circuits of the Ministry of Tourism of Syria (Syria-news.com, 2013).

The museum hosted several environmental education documentaries made in collaboration with the Syrian media. The documentaries themes included: knowledge of the museum and its collections, lectures on astronomy, knowledge of Syria geology (explorations in nature) – the geology TV program named “Geology of Syria” with over 66 episodes, program release in Syria.

In the museum, many scientific monographs were edited, unique in the geology field, and educational publications (brochures and flyers) (AL-AZKI 2002; 2006).



Figure 6. Educational activities in the museum – The Fossils Room (a) (original).

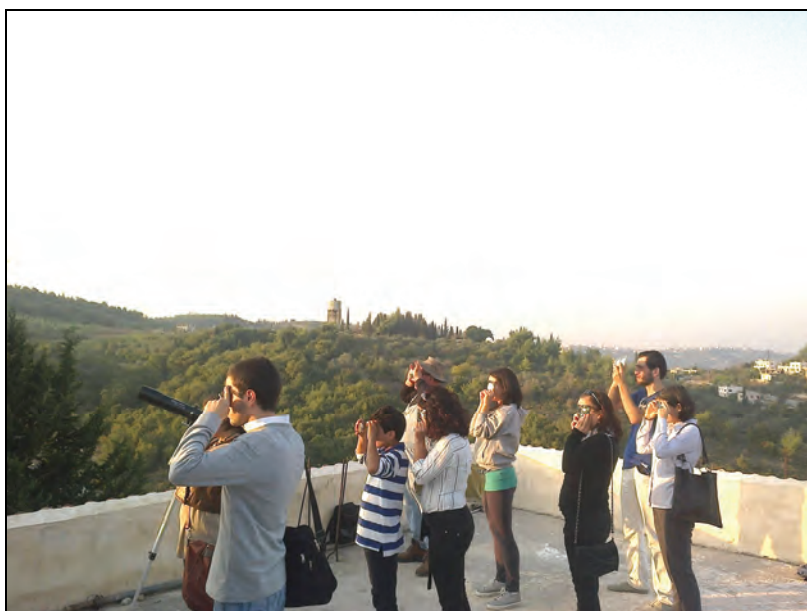


Figure 7. Educational activities in the Astronomical Observatory (original).

CONCLUSIONS

The museum is part of the cultural, educational and scientific heritage of Syria and of the whole world. It is a scientific and cultural institution and touristic place with international fame, placed on the UNESCO list. This museum aims at serving children, students, researchers, and other interested persons.

Entrance is free for all visitors, because AZKI opinion is: “if I don’t add something to this Universe, I am just an addition in it”!!!

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