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11th Erbe Symposium at Mexico-City, Pachuca and Real del Monte, 2011 (report)

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The 11th Erbe Symposium took place in Mexico, one of the leading producers of silver in world history. The wealth generated by the exploitation of this precious metal was one of the pillars of the Spanish crown during the three centuries of existence of the Viceroyalty of New Spain. In 1792, in the context of the reforms proposed by King CHARLES III of Spain, the *Real Seminario de Minería* - first American mining academy - was founded. Fausto DE ELHUYAR (1755 - 1833), its first director, adapted the Saxon curriculum in Mexico, since he had graduated in 1781 from the Freiberg Mining Academy.

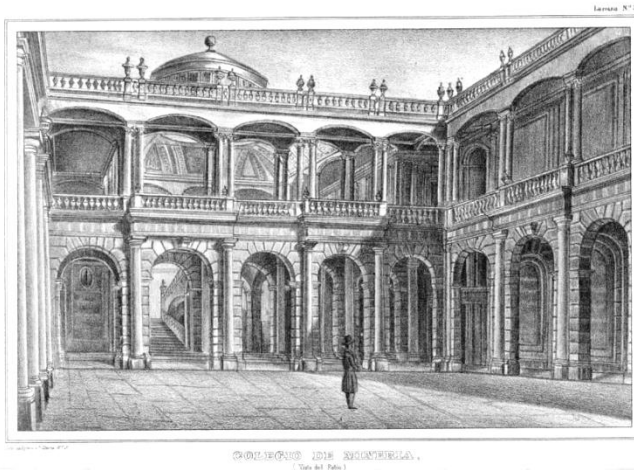


Fig. 1: *Palacio de Minería.*, hosting the library "Antonio M. Anza" where the lectures took part the three first days of the symposium. The history of the Palace of Mining, dates back to 1793 when the Royal College of Mines of New Spain acquired the land.

The mining districts of Real del Monte and Pachuca are one of the oldest in Mexico and have a rich history. They were characterized by their rich silver metal production and social movements led by miners, as well as the introduction and implementation of major technological advances throughout history.

The Erbe Symposium travelled from Freiberg/Saxony/Germany, 10th Symposium to Mexico City, home of the first academy of mines in America; to Pachuca and Real del Monte, home of three museums dedicated to cultural mining heritage.

According to the practice of previous editions of the Erbe Symposium, there were five days of academic sessions divided into five thematic groups:

1. International exchanges and of mining culture and technology and geological theories
2. Mineralogical and geological travels
3. Interdisciplinary research in the history of earth sciences
4. Industrial and mining heritage conservation
5. Mining archives

Sunday, 28th August 2011 was a "Welcome" with dinner at *Café Tacuba*, close to *Palacio de Minería* - the first touch with Mexican life style, local delicacies und even latin-american music; get to know each other - as far as possible - all participants of the symposium were not yet arrived.

Monday, 28th August started with the conference office (registration, distribution of abstract book etc.) in the library "Antonio M. Anza" (Fig. 4) of the *Palacio de Minería* (Fig. 1); followed by the opening ceremony - welcoming - by Belem OVIEDO (AHMM, A.C. – TICCIH-Mexico – ICOMOS Mexicano).

Miguel IWADARE, representative of TICCIH, and representatives of the university. Monday and even the next two following days lectures were held in the library "*Antonio M. Anza*". At the end of the first day there was a guided tour through the impressive construction (Fig. 5) and equipment of the *Palacio de Minería*, including the exceptional meteorites at the entrance (Fig. 6, 7).

Tuesday, 29th August, after the lectures a walking tour through the Historic Center of Mexico City took part. The organizers guided us on **Wednesday** - again after the lectures - to the Museum of Geology. The next day, **Thursday** 1st of September, the Symposium travelled to the mining area Pachuca, about two hours journey north of Mexico-City by bus. Visits were made to

1. San Juan Bautista shaft (Fig. 8, 9), Pachuca and
2. Servicio Geológico de México (Mexican Geological Survey, Pachuca).

From Pachuca we continued by bus to Real del Monte where we visited:

3. Acosta Mine Museum
4. La Dificultad Mine Museum
5. Former Mining Hospital Museum

We lodged there until the end of the symposium; the conferences were held at *La Dificultad Mine Museum*. Even the meeting of the members of the organizing committee took place here; Bolzano/Bozen, Italy, was fixed for the 12th Symposium in 2013.

Saturday, 3rd September, there was organized a post-symposiums field trip to the mining district of Real del Monte. Stopover at the location *Omitlán* and *Velasco* (gardens and hacienda), visiting great basaltic prisms close to *Santa María Regla* (Fig. 10) and the former *Hacienda Santa María Regla*, the market at Huasca and some places more.

There were a total of 44 proposals, from Germany 2; Austria 5; Brazil 2; China 1; Slovakia 1; Slovenia 1; Spain 3; United States 2; Italy 1 and Mexico 26: from of the states of Aguascalientes, Campeche, Coahuila, Distrito Federal, Hidalgo, Jalisco, Michoacan, Nuevo Leon, Puebla and San Luis Potosi.

Interesting conferences

There were a large number of interesting lectures. Contrary to European conditions there was shown a passion for the preservation of cultural heritage especially among younger scientists. A few selected examples of what has been presented:

The first session block was about interdisciplinary research on Earth Sciences History; Manuel CASTILLO MARTOS from university of Sevilla referred about *environment heritage of mining and metallurgical alchemists* groups. Lucero MORELOS RODRIGUEZ (Graduate in History, National Autonomous University of Mexico) presented "*The first geological map of Mexico*" (Fig. 2). During the 19th century, contributions to the knowledge of Mexican geology were executed by foreign and domestic researchers. The first Geological sketch of Mexico, 1889, a color map, scale 1: 3.000.000, with lithostratigraphic units was the first of its kind in Mexico and its construction was inspired by the international initiative to form the Geological Map of the World, as part of the Second Geological Congress in Bologna 1881, with the mission to design, promote, coordinate, prepare and publish geological maps. A sketch of a Geological Map of Mexico made by order of the Secretary of Public Works (Secretaría de Fomento o Ministerio de Fomento) General Carlos PACHECO (BOSQUEJO) for a special commission under the direction of Professor Antonio DEL CASTILLO Director of the National School of Engineers and chief of Mexican Geological Commission (founded in 1886) was presented (Fig. 3).

As first Austrian conference contribution Tillfried CERNAJSEK & Christoph HAUSER brought their paper about the wages of preservation of cultural heritage in the geosciences: a report on the results of a working group of the past "*Visegrád-Fund*", "*geological mapping in 18th and early 19th century in Central Europe*". Christiane KALB & Mariluci NEIS CARELLI, university of Joinville, Brasil/Free University of St. Catarina/Brasil and further authors talked to industrial heritage and of mining Heritage.conservation. Miguel IWADARE et al. referred on the '*The arrival of Canadian mining compa-*

nies and the loss of cultural heritage in small mining communities of Mexico'; QUE Weimin from Beijing University about the Mining Heritage in the Province Zhejiang, China. Alice SKOKOSWIKI from TU

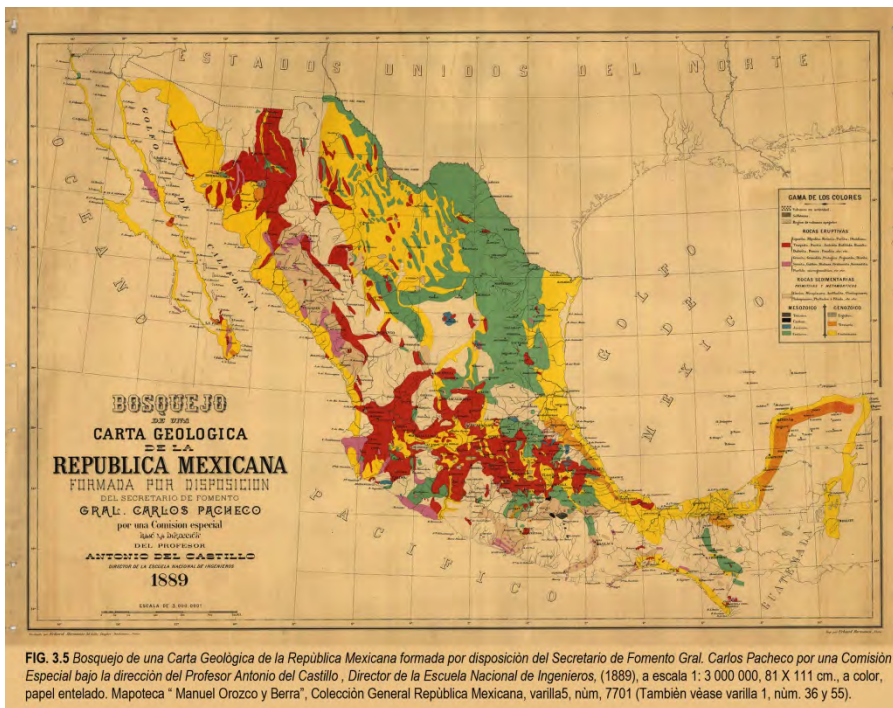


FIG. 3.5 Bosquejo de una Carta Geológica de la República Mexicana formada por disposición del Secretario de Fomento Gral. Carlos Pacheco por una Comisión Especial bajo la dirección del Profesor Antonio del Castillo, Director de la Escuela Nacional de Ingenieros. (1889), a escala 1: 3 000 000, 81 X 111 cm., a color, papel entelado. Mapoteca "Manuel Orozco y Berra", Colección General República Mexicana, varilla5, núm, 7701 (También véase varilla 1, núm. 36 y 55).

Fig. 3: Sketch of a Geological Map, Republic Mexico, (Carlos PACHECO, 1889)

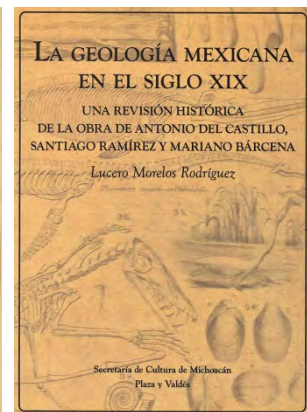


Fig. 2: MORELOS RODRIGUEZ Lucero (2013): The Mexican Geology in the 19th century; a historic revision about works of Antonio DEL CASTILLO of Santiago RAMÍREZ & Mariano BÁRCENA.



Fig. 4: Lectures in the Library Antonio M. Anza Palacio de Minería (Photo: HAUSER, 2011)

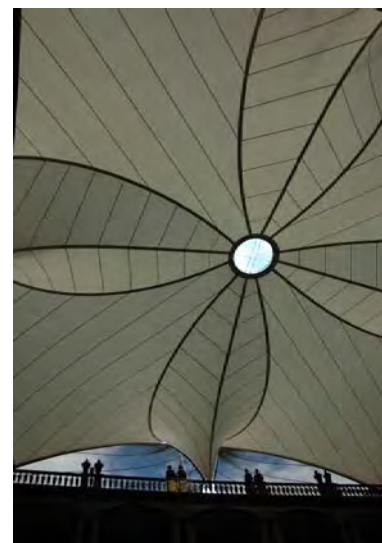


Fig. 5: Palacio de Minería: once here was an open area, now an architecturally well-designed solution (Photo: HAUSER, 2011)

Brandenburg-Cottbus, Germany, talked about industrial heritage sites with blast furnaces in Germany, France and Luxembourg. Further Austrian contributions came from Günther JONTES (ethnographical illustrations as a source of early mining in the Americas), Lieselotte JONTES (Egyptian students in the first school of mining in Vordernberg/Styria/Austria), Anneliese BITTERMANN-PLATTER, Christoph HAUSER & Karl KRÄINER presented the processing of a part of the estate Otto AMPFERERS (ca. 60 geological field books) and showed the large geological section (AMPFERER & HAMMER, 1911) on the occasion of 100th anniversary. On geological and mineralogical travels between 1904 and 1907 to southern Dalmatia Tillfried Cernajsek and Barbara Vecer showed the diaries of Catherina OF BUKOWSKI BY STOLZENBURG..



Fig. 6: Meteorite Chupaderos, 14.114 tons, Jimenez, Chihuahua, at the entrance of Palacio de Minería, (Photo: HAUSER, 2011)



Fig. 7: Meteorite "Zacatecas" 0.78 tons, holosyderite, first description: Friedrich Sonnenschmid, 1792. To imagine this smaller meteorite here: Fausto's total height is 94 cm. (Photo: Héctor PINEDA, 2013)



Fig. 8: Pachuca, province Hidalgo, the mining settlement (Photo: HAUSER, 2011)



Fig. 9: The San Juan Pachuca mine und Loreto Ore processing (Photo: ESCAMILLA-GONZÁLEZ, 2013)



Fig. 10: Santa María Regla, province Hidalgo: basalt columns located on the side of a canyon, almost described from the exploration in 1803 – 1804 by A. v. HUMBOLDT (Photo: HAUSER, 2011)



Fig. 11: Real del Monte, province Hidalgo, a group of symposium participants in front of the 'La Dificultad Mine Museum'. The Mine is now transformed into a museum with a joined conference room. La Dificultad Mine is the most important historical complex of Real del Monte and valuable evidence of major technological changes in the late nineteenth century in Mexico (Photo: ESCAMILLA-GONZÁLEZ, 2013)

Once again the organizers and volunteers are gratefully acknowledged - it was a successful exciting symposium. The conference will be remembered for all time by the participants. Thanks

Literature

Book of Abstracts (2011): The 11th International Symposium Cultural Heritage in Geosciences, Mining and Metallurgy, Libraries – Archives – Museums, Mexico City, Pachuca and Real del Monte, Mexico, August 29th to September 2nd, 97 p., 29 fig.

Proceedings of the 11th International Symposium Cultural Heritage in Geosciences, Mining and Metallurgy, Libraries – Archives – Museums, Mexico City, Pachuca and Real del Monte <in preparation>