
A taxonomic and stratigraphic database for Saudi Arabian Paleozoic palynomorphs

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Abstract

Since 1990, the CIMP (Commission Internationale de Microflore du Paléozoïque - International Commission on Paleozoic Microflora) has collaborated with palynologists from Saudi Aramco on the study of palynological assemblages, to define a detailed biostratigraphy of the Paleozoic successions of Saudi Arabia.

The Saudi Aramco-CIMP working group first met in Liège, Belgium, where renowned discipline experts gathered, such as Bernard Owens, John Richardson, Florentin Paris, Alain Le Hérisse, Maurice Streef, John Filatoff, and John Marshall, among others. Since the initial conference, that group has held numerous additional meetings, mostly special scientific sessions at international congresses, collaborated on countless studies, and published many scientific papers and special volumes devoted entirely to the palynology of the Arabian Plate. After more than three decades, a rather extensive body of literature on the Paleozoic Palynology of Saudi Arabia is now available in the public domain. This includes comprehensive studies of stratigraphically significant palynological assemblages as well as extensive taxonomic analyses with descriptions of many new taxa. However, the large number of papers published by different authors (some of which are now difficult to find) means that we are often confronted by opposing views and concepts especially on the systematics of certain groups of palynomorphs (e.g., acritarchs, cryptospores, chitinozoans). In this situation, it becomes difficult to integrate the large amount of available data into a consistent stratigraphic and taxonomic framework.

A summary of all data and results produced by the Saudi Aramco – CIMP collaboration is therefore necessary and timely. For this, we propose to establish a taxonomic and stratigraphic database of Paleozoic palynomorphs from the Arabian Plate based on all available data as well as published literature. A first attempt to build a global database of Paleozoic miospores, named PalyWeb, has been proposed in the past (Steemans & Breuer, 2007). This database was established using the free software Wikimedia, which is built on the Wikipedia model. However, the PalyWeb project has not evolved much beyond its initial stages and still remains unfinished due to the difficulties of collecting the enormous amount of data that

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exist in the literature on global occurrences of Paleozoic miospores. The experience of the PalyWeb project however can help now in the development of the herein proposed Saudi Aramco-CIMP taxonomic and stratigraphic database, which will have a more restricted scope, limited to the Paleozoic of the Arabian Plate. If successful, the Saudi Aramco-CIMP database could be successively expanded to include global, worldwide data on Paleozoic palynology.

Reference:

Steemans, P, Breuer, P., 2007.- PalyWeb: A palynomorph database project on the web. In: Steemans, P., Javaux E. (eds.), Recent Advances in Palynology.- Carnets de Géologie / Notebooks on Geology, Brest, Memoir 2007/01, Abstract 08 (CG2007_M01/08)

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