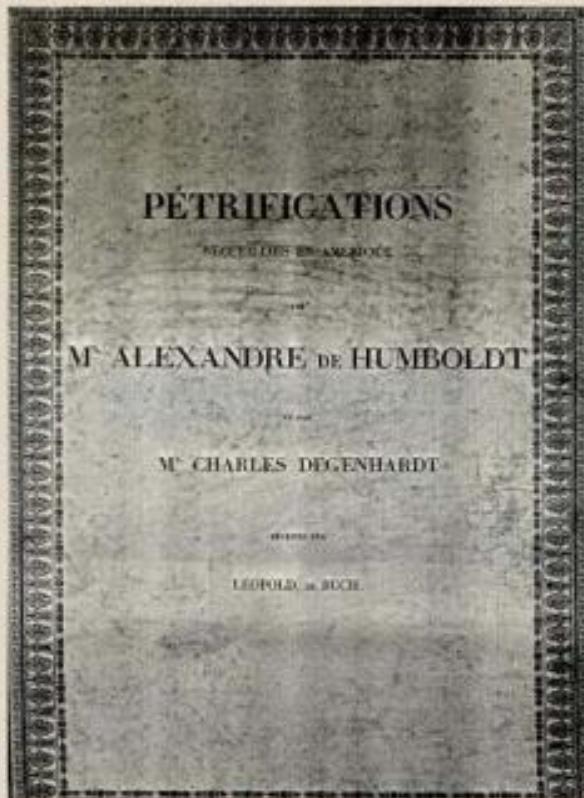


Revisión histórica y compilación de la fauna de Ammonites del Cretácico tardío en Venezuela Occidental



Ingeniero Geólogo
Tulio Peraza

JIFI 2000
IV SIMPOSIO VENEZOLANO DE HISTORIA DE LAS GEOCIENCIAS
30 de noviembre al 2 de diciembre de 2000



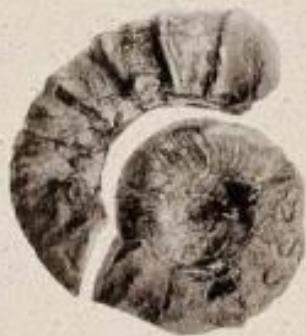
1839



Ammonites Rhomagensis (sic)
Cenomaniense medio

Este trabajo fue presentado en las IV Simposio Venezolanas de Historia de las Geociencias, Noviembre 2000, y el resumen publicado en el No. 71, diciembre 2000, de este Boletín.

1849



Anapuzosia tucuyensis (von Buch)

Albiense inferior - Cenomaniense superior



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GALERIA DE ARTE NACIONAL, 1993

Hermann Karsten
(1817-1908)

1850



Ammonites Tucuyensis



Leopold von Buch

Holotipo del Primer Ammonites descrito en Venezuela
por VON BUCH (1850)

1884 - 1885



Zweite Reise in Venezuela
in das Jahre 1882/83

auf Kosten der Augsburger Gesellschaft in Bayreuth

Dr. Wilhelm Steiers

in der Druckerei des Comptoirs der Deutschen Eisenbahn



Benueites mosquerae (Karsten) =
Ammonites Mosquerae Karsten

Turonense inferior



Paralenticeras leonhardianum (Karsten) =
Ammonites Leonhardianus Karsten
Coniacense superior - Santoniense inferior

1886



Hermann Karsten
(1817-1908)

1888



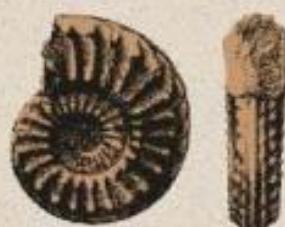
Schloenbachia sp.

Albiense superior - Cenomaniense superior

Determinación de G. Steimann sobre la fauna
recolectada por W. Sievers en El Tocuyo,
estado Lara



1897

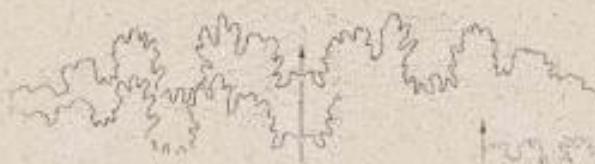
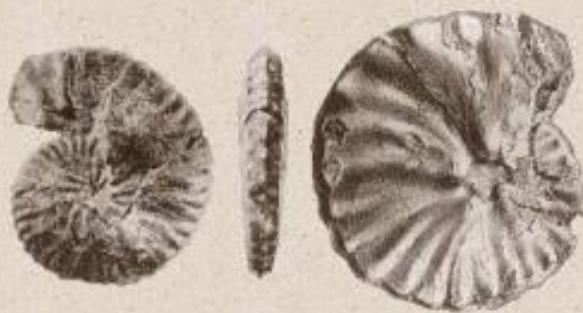


Mortoniceras cañaense =
Peroniceras canaense
Coniaciense inferior



Gauthiericeras Lenti =
Gauthiericeras lenti
Coniaciense superior

1924



Barroisiceras haberfelli (Hauer)

Turonense superior - Coniacense inferior

Determinación de W. O. Diedrich sobre la fauna
recolectada por H. Karsten en Perijá

1928

THE GEOLOGY OF
VENEZUELA AND TRINIDAD

BY
RALPH ALEXANDER LIDDLE



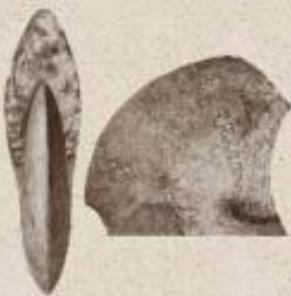
J. P. MCGOWAN, Publisher
FORT WORTH, TEXAS

1937



Schloenbachia sp.

Albiense superior - Cenomanense superior



Sphenodiscus sp.

Maastrichtiense

Algunas Observaciones en Capas Cretáceas
y Precretáceas de las Partes Suroeste y
Central de Venezuela ⁽¹⁾

por

L. Kehrer

INTRODUCCION

Durante su trabajo como geólogo de la Caribbean Petroleum Company, el autor ha tenido a menudo la oportunidad desde 1921, de hacer observaciones en rocas Cretáceas y Precretáceas en las regiones Suroeste y central de Venezuela, de estudiar los informes de la Compañía hechos por sus colegas, y de hacer uso de sus observaciones.

En el presente trabajo serán discutidas algunas de estas observaciones y el autor tratará de coordinarlas con los datos que existen en las obras publicadas sobre la materia. Naturalmente que no es la intención del autor la de presentar un trabajo exhausto sobre la materia; pues para ese objeto las observaciones parecen demasiado esporádicas y algunas veces las

(1) Presentado ante el Primer Congreso Geológico Venezolano, 16 de febrero de 1937.

1937

Sinopsis de las Formaciones Geológicas de
la Parte Occidental de la Cuenca de
Maracaibo, Venezuela ⁽¹⁾

por

H. D. Hedberg y L. C. Saas.

INTRODUCCION

Durante los últimos 20 años las compañías de petróleo han llevado a cabo considerables trabajos de investigación geológica en la región incluida en los Distritos de Perijá, Urdaneta, Maracaibo y Mara en el Estado Zulia, Venezuela. En consecuencia, han sido propuestos muchos nombres de formaciones y algunos de estos han aparecido publicados (Garner (3), Liddle (7), etc.). Sinembargo, la terminología estratigráfica usada hoy por las distintas compañías petroleras que tienen interés en la región está muy lejos de ser uniforme, y hay un desacuerdo con respecto al alcance estratigráfico de algunos de esos nombres de formaciones que están en uso general. El objeto de este trabajo es sugerir unidades formacionales definidas y nom-

(1) Trabajo presentado ante el Primer Congreso Geológico Venezolano, 16 de febrero, 1937.

1941



Psilotissotia leonhardiana (Karsten) =
Paralenticeras leonhardianum (Karsten) =
Ammonites Leonhardianus Karsten

Coniaciense superior - Santoniense inferior

Revisión de la fauna
recolectada por H. Karsten en *Geology of South America*

Volume 30

Number 10

BULLETIN
of the
AMERICAN ASSOCIATION OF
PETROLEUM GEOLOGISTS

OCTOBER, 1946

GEOLOGY OF MAKACALBO BASIN, VENEZUELA

E. A. SUTTORP

Cactus, Venezuela

ABSTRACT



The Makacalbo basin lies roughly in southeastern Venezuela and occupies the Venezuelan depression between the Orinoco River area and Lake Maracaibo. Two oil fields of the major Colombian basin system of South America lie on the northeast margin of the basin, namely Lake Maracaibo and Cumaná.

The area of the basin is approximately 30,000 square kilometers (2,000 square miles), of which about 11,000 square kilometers (2,000 square miles) are covered by Lake Maracaibo, a large body of brackish water, 100 miles long and 20 miles wide. The Caribbean Sea, by way of the Gulf of Venezuela, lies to the east of the basin. By far the greater part of the basin is unexplored, though some scattered data and theories written in the literature since 1920 can readily be found.

The presence of oil in the Makacalbo basin has been known for centuries, but it was not until the early 1920's, following the first World War that the major oil companies took an interest in the area. The first oil well was drilled in 1923, and later others followed the Rio Grande field, east of Lake Maracaibo. During the next 15 years the new companies developed the El Pao, La Guaira, and Coquivacoa (Tepu) fields, southeast of the lake, and in 1937 drilled the discovery well of the Riohacha field. This company's interests assumed the character of oilmen and it has not long since made its first million-barrel oil sale. A number of independent oil companies were active in Venezuela, Venezuela at the moment being only the Occidental Petroleum Company, Standard Oil Company of New Jersey (Dowell Group), the Hess Grande Old Company (Hess Oil Corporation), the Texaco Company (Standard Oil Company), and the Standard Midwest Oil Company (Standard Oil of California) are active in the Venezuelan part of the basin, while the Canadian Petro-Juan Company (During-Toronto Company) is also active.

About 50 per cent of the area there is covered by the series of Lake Maracaibo and coastal deposits, but the remaining highlands expose a pre-Cretaceous section extending from the pre-Cambrian to Recent. The Devonian, Permian, Paracarbo-foram, and Triassic were periods of rather widespread deposition, but such was followed by strong lateral uplift and erosion so that only remnants of the original deposit are left in the weathered surface.

The pre-Cretaceous is represented by the numerous monomictic rocks of the Tucupi and Granito series, which form the core of the bordering mountain ranges. These are followed by the largely arenaceous Monocluvello series of Upper Cambrian to Upper Ordovician age. The Devonian is represented in the Sierra de Perijá, where more than a glossoconch (Murex) fossil of the genus *Leptostoma* is the only fossil found. The Permian rocks of the Paracarbo-foram series of the Puerto Principean is distributed extensively throughout the Sierra Nevada and along the eastern slopes of the Sierra de Perijá. The greatest thickness is in the type area of the Merey Andes, where 2,000 meters (6,500 feet) have been measured. The methods of the Upper Triassic La Quemada formation are generally similar to those in the eastern region and are best developed in Táchira and Mérida, where thicknesses up to 1,500 meters (4,900 feet) have been noted.

* Read before the Association at Chicago, April 2, 1946. Published by permission of the Director, Petroleum Commission.

© Geologic, Crude Petroleum Commission.

1946

1946



Protacanthoceras sp.

Cenomaniense



Prionotropis sp.

Turoniano superior - Coniaciense inferior

BULLETIN
of the
AMERICAN ASSOCIATION OF
PETROLEUM GEOLOGISTS

FEBRUARY, 1954

REVISION OF LOWER CRETACEOUS STRATIGRAPHY
OF VENEZUELA¹EMILE ROD AND WOLF MAYNC
Caracas, Venezuela

ABSTRACT

The understanding of the Cretaceous stratigraphy in Venezuela is hampered by some vaguely defined or doubtful type localities. A revision of the Capoila formation of Western Venezuela is proposed as likely to settle at the type locality on the Rio Capoila revised that the contact with the La Loma formation is made through a large part of the section is indicated by a thrust.

The name "Capoila" is retained for the lower part of the section, which includes the Capoila formation and the overlying La Loma formation, as defined by Houghton and Staub (1949). These distinct rock units, namely, from top to bottom, the Maracaibo, Agua, and Apia formations, are recognized as the Capoila group. The Apia formation was introduced by Norton in 1946 for the lower part of the Capoila group.

In a very heterogeneous and widespread interval of black laminated limestones containing fine siltstones (the La Loma formation), the Apia formation is again subdivided into three units: the lower, middle, and upper Apia series. The middle Apia series, combined with a rich ammonite fauna, makes the middle Apia an interesting key formation.

The Apia formation of Surinam is considered by the writer Aguaformación is just a small part of the new Loma formation. The upper part of Surinam's Capoila is an equivalent of the Maracaibo formation.

For a long time it was felt that the El Cedral formation (Goldschmidt, 1930) of northwestern Venezuela formed a continuation of the Capoila formation, the Barreales formation, and the Guayana group above. As type localities of a unit of such magnitude the section of El Cedral in the Páez river is no place that it should be discarded. Houghton and Fyfe (1949) made the best try to correct the erroneous categorizing of the El Cedral when they recognized the Chiriquí formation.

It is proposed to subdivide the interval between the Barreales and Guayana group into three dominions: the Venezuelan, Colombian, and Barreales formations which, in turn, are subdivided into subunits. The Venezuelan, Barreales or Guaya, upper Barreales, northern, lower Chiriquí, middle Chiriquí, and Chiriquí (Gualdría, Vargas, and Coche) formations.

The lowermost limestone facies of the study Barreales formation is called the Maracaibo formation.

All the intermezzocephalic Cretaceous sediments observed in Western Venezuela, the Andes of Mérida, and northwestern Venezuela are shelf deposits. Shallow conditions toward a progradational facies (progradational and back) is the restricted area of Kragelskii and Staub are reported only in the Maracaibo area or near this part of the seaway system in the Caribbean Coast Range.

¹ Manuscript received, July 15, 1953. Published by permission of the Venezuelan Atlantic Refining Company.

*Mariella bergeri* Brongniart

Albiense superior - Cenomaniene

CRETACEOUS IN WESTERN VENEZUELA AND THE GUAJIRA
(COLOMBIA)

O. Benz

A regional outline for the stratigraphy of the Cretaceous in Western Venezuela and the Guajira peninsula is given.

During Upper Jurassic and lower Neocomian time three troughs developed; the Guajira trough in the north, the Machiques trough in the west, and the Uriante trough in the south; these bound a block known as the Maracaibo platform. The eastern delimitation of this platform is still uncertain.

In the Guajira trough a thick sequence of Upper Jurassic, Valanginian, Hauterivian and Barremian sediments with rich ammonite faunas was laid down. The Machiques and Uriante troughs were filled with clastic deposits known as the Rio Negro formation.

The Maracaibo platform subsided below sea level at the beginning of Aptian time when limestones on the north half of the platform (Cogollo formation) were deposited grading into sandstones towards the south (Tomón formation).

The uppermost part of the Cogollo/Tomón formation coincides with a pronounced subsidence of the southern part of the Maracaibo platform at the end of Albian time. The northern part of the platform up to the Paez fault subsided only at the end of Cenomanian time, while the northernmost part in the Guajira subsided at the end of Turonian time.

During Cenomanian, Turonian and Coniacian time bituminous limestones with a pelagic fauna were deposited on the northern part of the Maracaibo platform. They represent one of the important oil mother rocks of Venezuela and are known as the La Loma formation. Southward these limestones grade into shales with intercalations of biostromal limestones, and finally into clastics exposed along the southwest foothills of the Andes.

The Senonian is represented on the Maracaibo platform by a thick body of shales: the Colón formation. These shales grade into limestones towards the north (Guajira), into clastics towards the south (southern Tachira and Barinas) and into a thick sequence of pelagic limestones, cherts and silts towards the east.

1954

1956

1959

MINISTERIO DE MINAS E HIDROCARBUROS

REPÚBLICA DE VENEZUELA

DIRECCIÓN DE GEOLÓGIA

Vol. 1, N° 10, Pág. 4-60, 10 páginas

EDICIÓN 1000 A DISTRIBUERSE 1000

ESTRATIGRAFÍA DEL CRETACEO EN VENEZUELA
OCCIDENTAL

por G. REINZ (*)

RESUMEN

Se presenta una revisión de las unidades stratigráficas del Cretáceo en Venezuela Occidental, representando en su mayor parte los Años, con indicación de estratotipo y aquello que muestra los límites tipo de los lados formaciones y estratos propios; se discute el ordenamiento y la correlación estratigráfica de las unidades stratigráficas.

Las unidades informadas están y están en la Formación Apurí, en la región de Petare, así como integrantes respectivamente: Táchira, Mérida y Trujillo.

De la región andina, una unidad secundaria del Cretáceo occidental, es sobre todo conocida en las cuencas formadoras: El Río Negro, Trujillo, Litoral de Guárico, Páez Alto, La Paya, Capacho y La Loma, Colón y Mito Junín. La formación Capacho se divide en las unidades La Grana, Estero de Sibonito y Guaparo, o laderas transversales hacia la Formación La Loma de los Estados Trujillo y Lara. Así, la Formación La Loma se divide en las subformaciones La Agua, Chagualí y Tachací. Un importante estratófano de areniscas se da en la Formación Colón, en Lara, en dirección al noreste Caldas.

Al sur se han definido al sur de los Andes a verdes que se comprende la Subregión este de Estado de Guárico, se introducen otras cuencas: La Formación Capacho pasa transversalmente a la Formación Esmeraldas, así como la Formación La Loma en forma latitudinal, por lo que al Pasaje Jatia de La Morita la Formación La Tancita pasa transversalmente a la Formación Quemado, siliciclas, de grano fino, y la formación Colón se complementa por la Formación Dariquiche, cercana.

Las Facies del Cretáceo Superior, al sur de Chiriquí, son consideradas ahora como una cuenca abierta basada en el sistema deposicional ("trenque") de Bergamont, como lo es la Formación Cañaveral.

(*) Geólogo: Departamento Minero de Venezuela

1977

V CONGRESO GEOLOGICO VENEZOLANO

CARTAGO 1977 AL 20 DE SEPTIEMBRE DE 1977

THE LITHOLOGIC UNITS OF THE CRETACEOUS
IN WESTERN VENEZUELA

G. REINZ (A)

INTRODUCTION

A readily comprehensible compilation is attempted on the relations between lithologic units composing the deposits of the Cretaceous with their different depositional areas in western Venezuela.

The columnar sections in 1:10000 are based on detailed field work in 1:10000. The investigations have been carried out with unified surveying methods, resulting in a well balanced regional picture.

Preliminary results were presented at the Twentieth Session of the International Geological Congress in Mexico City, September 1956. This paper has been distributed, but it has never been published. Later in 1959 some newly introduced formation names were defined, without integrating them sufficiently in their regional setting. Since then the problems have been thought over, and revised according to the Lexicon Stratigráfico de Venezuela (1970).

Representative surface and some well sections, located in and around the Maracaibo Lake basin (Fig.1), are arranged in four cross-sections (Fig.2-5). These sections provide a three-dimensional outline of some of the lithologic units facilitating palaeogeographic reconstructions. As an example the Capacho Formation occurring in the Perijá as well as in the Andes might be quoted.

Chronostratigraphic correlations are based as far as possible on ammonoids, which however, occur rather sporadically. Correlations relying on Pelecypoda are still unsatisfactory. They mostly depend on thin-sections, as isolated fossils, especially of pelagic assemblages are not commonly available from the Cretaceous.

THE CRETACEOUS
AMMONITES
OF VENEZUELA

OTTO RENZ

1982



UNIVERSIDAD CENTRAL DE VENEZUELA
FACULTAD DE INGENIERIA
ESCUELA DE GEOLOGIA, MINAS Y GEOTERAPIA
DEPARTAMENTO DE GEOLOGIA



BIOFAZES DE AMONITOIDOS DEL CRETACICO TARDIO DEL
OCIDENTE DE VENEZUELA

TRABAJO ESPECIAL DE GRADO
PRESENTADO ANTE LA ILUSTRE UNIVERSIDAD CENTRAL DE VENEZUELA POR
TULIO ENRIQUE PERAZA LIS PARA OBTENER AL TITULO DE INGENIERO GEOLOGO

CARACAS, ABRIL DE 1999

1999

Cenomaniense:
4 localidades, 13 especies

Turoniense temprano:
13 localidades, 89 especies

Turoniense tardio:
5 localidades, 13 especies

Coniaciense:
12 localidades, 64 especies

Santoniente:
1 localidad, 1 especie

Campaniense:
3 localidades, 4 especies

Maastrichtiense:
1 localidad, 1 especie