



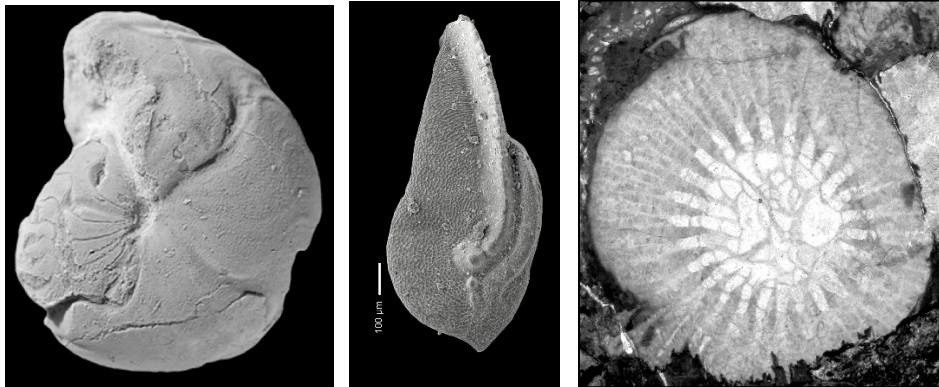
*INTERNATIONAL UNION OF  
GEOLOGICAL SCIENCES  
COMMISSION ON STRATIGRAPHY*

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**SUBCOMMISSION ON  
DEVONIAN STRATIGRAPHY**

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## OBITUARIES

### PAUL SARTENAER

(1925 – 2015)

D. BRICE



Paul SARTENAER in his office in 1983  
(photo supplied by his wife Masha HECKER)

In July 2015, the international scientific community lost a distinguished scientist, who devoted sixty years of his life to the systematic study of the rhynchonellids and the spiriferids (Brachiopoda) at the Royal Institut of Natural Sciences of Belgium in Brussels. Paul SARTENAER's research was oriented on the definition of taxa and their stratigraphic distribution in order to obtain correlations in the Devonian and Lower Carboniferous of many areas of the world. Paul was born in Brussels and he lived there with his family at the place Sainte Catherine, situated in the center of the city. As a student at the College Royal Marie-Thérèse de Herve, he followed his graduate studies in the "Ecoles spéciales des Mines du Génie civil, des Arts et Manufactures, d'Architecture et d'Electricité" at the Catholic University of Leuven, where he received his diploma of "Ingénieur civil des Mines" in 1948, before he got involved in the Resistance in 1944 (active service as a war volunteer). Subsequently, he obtained his license in geological and mineralogical sciences in 1950. He developed his scientific career at the Royal Institute of Natural Sciences of Belgium, where he was

initially a "naturalist probation", then "naturalist", before becoming Assistant Director of laboratory (1958), Director (1965), Head of the Department of the Palaeozoic Invertebrates Section (1969), and then Head of the Department of Paleontology and Honorary Head of Department (1990).

All these functions were connected with intensive research. As early as 1955, he pointed out the confusion between two types of rhynchonellid brachiopods (*Nudirostra*, *Camarotoechia*) and specified their external and internal characters by serial sections of *Nudirostra*. He was among the first to apply this method in the brachiopod studies. In his laboratory, many researchers (including this author) began to learn this method. In 1956, he discovered erroneous interpretations of FORIR (1895-1901) and FORIR *et al.*, 1900) concerning rhynchonellid (*dumonti*, *omaliosi*, *triaequalis*) and a spiriferid species (*Cyrtiopsis murchisonianus*) of the lower Famennian of Belgium. During the same year, he created two biozones in the lower Famennian of Belgium, based on the distribution of two species of *Pugnoides* WELLER (including a new one). In 1957, he went ahead by publishing a sketch of the biozonation of Famennian deposits and demonstrated a global significance based on five species of Famennian rhynchonellids: two from Western Canada, two from the United States of America, and one from Belgium. He devoted a note to each species, stating their external and internal characters, and created for them in 1961 his first five new genera.

Paul's originality as a scientist has to be emphasized. He was interested enough in the present biotic world to perform in 1959 a cork-jacket diving in the Gulf of Fos, in order to discover its underwater fauna. He published in 1963 the "Ecologie des Brachiopodes paléozoïques à la lumière de l'écologie actuelle" and "Nos yeux sous la mer", his considerations of our knowledge of underwater paleoecology. His interest in the stratigraphy of the Upper Devonian of Belgium induced him to demonstrate in 1974 the confusion resulting from the use of terms such as the Schistes de Matagne, Schistes de Barvaux etc., which lacked clear definitions. In 1970, he recalled that the limits of stages, such as the Frasnian and Famennian, were established based on fossils. In 1973, he, therefore, reminded that limits in the famous Senzeilles section, defined by Gosselet (1877), were based on the presence of the spiriferid *Cyrthia murchisoniana*, a species belonging since 1956 to the genus *Cyrtiopsis*, which is abundant in the lower

Famennian of Belgium. A similar example of his interest in global chronostratigraphy was given in 1985, when he summarized the global distribution of the types of rhynchonellids around the Givetian/Frasnian and Frasnian/Famennian boundaries, with a correlation to the conodont zones.

Paul was a long-term Titular Member and, after retirement, a Corresponding Member of the SDS (Subcommission on Devonian Stratigraphy). He was also a member of the International Working Group on the Devonian-Carboniferous boundary. Paul was polyglot, actively participated in meetings in many different countries. Since 1955 he followed his interest in stratigraphic terminology and the possible limits for series, stages and sub stages, in order to propose them for acceptance to the IUGS (International Union of Geological Sciences). Most proposed limits are generally based on pelagic fossils (with wide distribution), such as conodonts or goniatites, but never on brachiopods, which were considered as fossils with limited stratigraphic distribution because most lived in shallow seas (platforms). He did not really agree with this opinion and wanted to show the significance of brachiopods, especially of rhynchonellids, to establish limits in successions in many parts of the world lacking pelagic faunas. His speech concerning the Ardennes 'Strunien' (SDS Meeting in Rochester, 1997) during the discussion of the possible subdivision of the Famennian into several substages was remarkable. Whereas the deposits in the Avesnois did not attract much attention, he recalled his publications on the Belgian Etrœungt Limestone (SARTENAER 1964, 1965) and indicated that similar deposits existed in eighty-five sedimentary basins, twenty-five countries, and five continents, to conclude "qu'il ne se passe pas une semaine ou un mois sans que les couches d'Etrœungt ou le Strunien ne soit mentionnés dans une publication".

After numerous visits of outcrops and exchanges with many palaeontologists (German, American, Australian, British, Canadian, French, Indian, Italian, and Russian or with specialists on faunas of Afghanistan, Iran, Morocco etc.), he created in 1970 fourteen new genera of rhynchonellids from the Silurian to the Carboniferous-Pennsylvanian, specifying also their geographical and stratigraphical distribution: upper Silurian - lower Devonian? (1 genus), Middle Siegenien - Eifelian (1), upper Eifelian - lower Givetien (1), lower-middle Givetien (2), upper-middle Givetien (1), lower Frasnian (2), Famennian (1), upper Famennian (3), lower Tournaisian (1), middle Pennsylvanian (1). His last

60 publications, since 1984, are almost exclusively devoted to rhynchonellid systematics. Since some colleagues criticized him to have multiplied the number of rhynchonellid genera, he analyzed in 1986 the causes of this trend and expressed the question: Shall we get closer to a more accurate picture of reality, or in man-made structures? He concluded that he definitively has to adhere to the first hypothesis. In 2005, he established the systematic revision of rhynchonellids from the upper Emsien - lower Eifelian of Europa, North Africa, and Asia (Altai SW) assigned to the genus *Uncinulus*, and created the family Nucinulidae, which included four new genera: *Lapinulus*, *Oligodesmmerhynchus*, *Palinulus* and *Cuninulus*, in which he retained many previously known species. He created four species of *Cuninulus*, which clarified the stratigraphy of the upper Emsien - lower Eifelian of the Dinant Basin, in the Eifel, the Cantabrian Mountains, the Dra plains of Morocco and Mauritania, and of the Holy Cross Mountains in Poland.

In sixty years of hard work, Paul defined more than 140 new taxa of rhynchonellid brachiopods: 94 genera - 2 Carboniferous, the others Devonian (36 Famennian, 25 Frasnian, 7 Givetian, 3 Eifelian, 3 Emsian, the others are present in two stages) - and 50 species. His purpose was to clarify the stratigraphy of the Devonian in Belgium and global correlations, enabling especially the dating of platform successions without pelagic faunas. Some of his publications, such as ERRERA et al. (1972), entitled "Le Calcaire de Givet et le Givétien à Givet", are especially remarkable and merit the attention of all scientists interested in the Givetien. They will find data on multiple aspects accompanied by a very well documented bibliography. He also devoted a part of his research to Devonian (4 Frasnian cyrtospiriferids, 2 common species of *Cyrtiopsis* from the lower Famennian of Belgium) and Lower Carboniferous spiriferids (3 taxa, Tournaisian of Belgium and from the Pennsylvanian). One should also note other important items, such as the discovery of the goniatite *Cheiloceras* in the lower Famennian of the Vesdre Massif (Belgium), and the presence of a plant levels in the central Alborz (Iran). In his bibliography (see BRICE 2016), the reader will notice that about 100 or more of his 150 publications are devoted to the rhynchonellides.

### Acknowledgements

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