

Polish contributions to Paleozoic palynology

INTRODUCTION

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The thematic volume of *Geological Quarterly* is dedicated to the international palynological conference of the International Commission of the Paleozoic Microflora (CIMP) 2010 which was held in Warsaw and Kielce on 13–19th September, 2010. This was the first CIMP General Meeting in Poland and its theme was “Palynology and its possibilities: record of climate and environmental changes”, but the program was open to all Paleozoic and even Precambrian palynology topics.

This thematic volume contains selected papers presenting different aspects of Paleozoic palynology with studies of acritarchs (Jachowicz-Zdanowska), chitinozoans, miospores (Fijałkowska-Mader and Malec, Górecka-Nowak and Muszer, Higgs and Williams, and Machado *et al.*), and pollen and spores (Stolle).

As organizers of the conference we wished to honour Polish researchers and researchers from Poland, by placing short biographical notes on them in the chapter “Polish contributions to Paleozoic palynology”. Two of these scientists – Aleksander Jachowicz and Stanislas Loboziak – were among the “fathers of founders” of the Commission Internationale de Microflore du Paléozoïque (CIMP) and they were very active CIMP members. Professor Hanna Górka was a world-class specialist in acritarchs, dinoflagellates, melanosclerites and radiolarians. We hope to keep their lives and scientific achievements in our memory.

Prof. Hanna Górka (Poland, 1930–2008)

Hanna Górka was born in 1930 in Kraków. She spent her school years in Kraków and began her studies at the Faculty of

Biology and Earth Sciences of the Jagiellonian University. She continued her palaeontological studies at the Faculty of Geology of Warsaw University and obtained a MSc diploma in 1955. She continued her professional academic career at Warsaw University, and was awarded a PhD degree in nature sciences in 1963, a habilitation in 1970 and a professorial degree at the Faculty of Geology in 1991.

Her scientific interests concerned microfossils, mainly Ordovician, Devonian and Cretaceous acritarchs, Ordovician melanosclerites, Ordovician, Devonian and Cretaceous radiolarians, Jurassic and Cretaceous dinoflagellates, Cretaceous calcareous nannoplankton and Jurassic and Tertiary holothurian sclerites. She focussed on studies of the morphology, taxonomy and biostratigraphy of these microfossils as well as on improving research methods (processing of rock samples, extracting of specimens, sample enrichment).

Hanna Górka was an extraordinary specialist in micropalaeontology, a lecturer in palaeontology and micropalaeontology at the Faculty of Geology of Warsaw University, a lecturer in palaeobotany and some branches of botany at the Faculty of Biology of the National University (UNAZA) in Zaire (1974–1976), and a lecturer in micropalaeontology and invertebrate palaeozoology at Constantine University in Algeria (1981–1984). She was a reviewer of many Polish and foreign scientific publications as well as grants and other scientific projects. She supervised the scientific progress of many undergraduate masters and doctoral students of the earth sciences.

In her teaching, Hanna Górka prepared an excellent micropalaeontological collection of Polish and foreign material (Foraminifera, Ostracoda, Radiolaria and others) for training

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Prof. Hanna Górka

and comparison purposes. Prof. Górka was interested in the promotion of the palaeontological knowledge in radio programmes and science-fiction novels. She organized an unit of the League of Protection of Nature (LPN) at Warsaw University and received a LPN silver badge for this.

Being fluent in English and French, Prof. Górka fruitfully collaborated with almost 300 palynologists all over the world. Many of them visited her or did research in Warsaw, for example Dr. Reinhard from Germany, Professors Loeblich and Tappan from USA, Dr. Martin from Belgium and Dr. Konzalova-Mazan from Czech Republic. As counterpart to this, many scientific centres invited Prof. Górka for visiting research fellowships, for example the Lab. de Micropalaeontologie de l'Ecole Pratique des Hautes Etudes, French Government Scholarship, Scholarship ASTEF, Inst. Royal des Sciences Naturelles in Brussels, Rennes University, the Geological Institute in Stockholm, Museum National d'Histoire Naturelle in Paris. These numerous and frequent international collaborations enabled Prof. Górka to take a part in CIMP and INTERRAD (International Radiolaria Group) activities as well as to publish excellent contributions.

The research papers of Hanna Górka were characterized by unusual accuracy and care. Her articles, even old ones from the 1960's and 1970's are marvellously illustrated with photos and drawings, and contain exact and clear descriptions. Many of her publications remain fundamental to further research into Paleozoic palynomorphs. Personally, Prof. Górka considered her publication "Sur les Melanosclerites extraits des galets erratiques ordoviciens de Pologne" published in the Bull. Soc. Geol. Miner. Bretagne in 1971, her most important research work. In this paper she had revised the systematical affinity of

the melanosclerites, and suggested not a cnidarian origin as considered until then, but rather that they were algae similar to representatives of the Siphonocladaceae. She has devoted particular attention to the Ordovician acritarchs of Poland, with her important paper "Microorganismes de l'ordovicien de Pologne" (1969).

Professor Górka has awarded many prizes for Paleo- and Mesozoic research, publications and for successful international collaboration, most significantly by the French Academy of Sciences in 1990, and by the Ministry of Education and Rector of Warsaw University.

Professor Hanna Górka died in Warsaw on 21th March 2008.

Prof. Aleksander Jachowicz (Poland, 1928–1989)

Aleksander Jachowicz was born on 26th February 1928 in Grybów, a small town located in the Fore-Carpathian region of SE Poland. His father Stanisław was a teacher and came from Gorlice, the old mining and industrial centre. During the Second World War Aleksander Jachowicz finished primary school and he continued his education for three years in secret lessons at Nowy Sącz High School. One year later, as a young man he started an earning work at a photographic workshop in Grybów. Simultaneously in 1941–1944 he was a courier for the Secret Teaching Organization in the Nowy Sącz and Grybów districts. In July 1946 he graduated in the Humanistic High School in Grybów and started studies at the Faculty of Geology and Survey (prospecting branch) of the Academy of Mining and Metallurgy in Kraków. He finished his studies in 1952 as an engineer-geologist and obtained his MSc degree in technical sciences.

In 1949 Aleksander Jachowicz began his professional career in the Polish Geological Institute in Kraków (Ore Department), one year later he moved to the Coal Department – Carboniferous Palaeobotany Branch. In next few years he worked in the Department of Coal Deposits of the Academy of Mining and Metallurgy. He briefly worked at the Uhelný Průzkum in Ostrava in 1955–1956, and the scientific supervision of professors Tadeusz Bocheński and Stanisław Doktorowicz-Hrebicki allowed him to choose his scientific specialization in Carboniferous palaeobotany and geology, particularly in the palynology of the Upper Silesia Coal Basin.

The second part of Aleksander Jachowicz's professional career began in 1957 in the Geological Institute, firstly as assistant in the Carboniferous Sporology and Coal Petrology Department in Czeladź, and then in 1972–1975 as the head of the Upper Silesian Branch in Sosnowiec. In 1974, Aleksander Jachowicz began academic work as lecturer in palaeontology and stratigraphy at the Silesian University in Katowice. In 1975 he became professor of natural sciences as well as co-organizer of the Earth Sciences Department of the Silesian University in Sosnowiec. Aleksander Jachowicz, an excellent organizer and friend of young people, was the dean of the Earth Sciences Department in 1975–1981, and the prorector of the Silesian University in 1982–1989. During the many years of his academic career Aleksander Jachowicz supervised twelve MSc theses and six PhD theses; he reviewed five habilitation theses and endorsed many professorial nominations.



Prof. Aleksander Jachowicz

Aleksander Jachowicz was one of the founders of the International Commission of the Paleozoic Microflora (CIMP) in 1958 and for many years was the CIMP secretary and a very active member. In 1968–1974 he was head of the Polish-Czechoslovakian Commission of Geological Research. Since 1958, Aleksander Jachowicz participated in many International Congresses of Carboniferous Geology and Stratigraphy, Coal Petrology Conferences, Palynological Congresses and International Geological Congresses.

Aleksander Jachowicz was the author of 120 publications (including 8 monographs, 20 studies and 60 articles), mainly concerning Carboniferous palaeobotany, palynology, stratigraphy and the geology of coal deposits (he received a First Degree State Prize for participation in the discovery and documentation of the Lublin Coal Basin).

Sonia Dybova-Jachowicz was often a co-author of his scientific papers. She married him in 1959. Their daughter Monika Jachowicz-Zdanowska has continued palynological studies as a Precambrian and Early Paleozoic acritarchs specialist. The most important of Aleksander Jachowicz's monographs were on the microfloral characteristics of the Carboniferous of Lublin Coal Basin (1966) and the Upper Silesia Coal Basin (1972) as well as taxonomical monographs concerning the genus *Tripartites* (1966). The Lower Carboniferous microflora of the Holy Cross Mountains and from the Paleozoic basement of the Carpathian Foredeep was also a focus of his publications. One of his last research works concerned the palynology of the Lower Carboniferous from the Canadian Arctic Archipelago with contributions with Utting and Jachowicz (1989). As an active academic teacher for many years, Aleksander Jachowicz was co-author (with Sonia

Dybova-Jachowicz) of a palaeobotany textbook, which was published only after his death (2003) by the Silesian University Publishing house.

Aleksander Jachowicz was a well-organized, respected and hard-working person. His main leisure interests were literature and photography as well as gardening and cooking.

Aleksander Jachowicz died in Katowice on 15th August 1989.

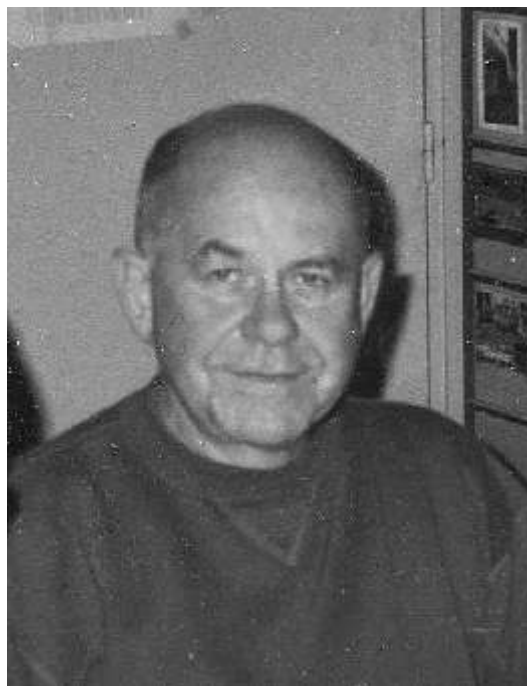
Dr. Stanislas Loboziak (France, 1937–2002)

Stanislas Loboziak was born on 7th February 1937 at Carvin, in the north of France. His parents were Polish emigrants from Silesia. His father worked in the Lille area as a coal-miner, and died during the Second World War.

Being brought up in a coal mining region, it was probably not surprising that one of Stan's first scientific interests was geology and palaeobotany, which he started to study at the University of Lille.

Stanislas Loboziak obtained a MSc (Doctorat de 3^{ème} cycle) in 1962, and a PhD (Doctorat d'Etat des Sciences Naturelles) in 1969. From 1962 he worked in that same university as a researcher of the French National Centre of Scientific Research (CNRS).

After investigations on megaspores and their application in biostratigraphy, he soon came to the miospore stratigraphy of the Westphalian, demonstrating, for instance, the occurrence of Westphalian D strata in the northern France coal basin. Subsequently he worked on spore stratigraphy in different coal basins in France (e.g., Loboziak and Streel, 1981), but also in Spain, Turkey, USA, and USSR, in collaboration with almost all the palynological laboratories of Europe.



Dr. Stanislas Loboziak

In the late seventies, he extended his studies stratigraphically to the Lower Carboniferous of Niger and Libya, and to the Devonian-Carboniferous transition of Canada and Iran. He studied the Middle and Late Devonian in Algeria, Libya (e.g., Loboziak and Streel, 1989), Saudi Arabia and Brazil (e.g., Streel *et al.*, 2000). In the early nineties he started a fruitful collaboration with Petrobras palynologists, participating in updating the biostratigraphy of the Devonian and lower Carboniferous of Brazil, which made him the undisputable Middle Devonian to Carboniferous expert in Gondwana miospore stratigraphy (e.g., Loboziak *et al.*, 1999; Loboziak and Melo, 2000).

Dr. Stanislas Loboziak made the palynological slide collection of Lille University (U.S.T.L., Lille, France) available for this study.

Stan played an essential role in Paleozoic palynology, in particular in Upper Devonian and Lower Carboniferous miospore research. He collaborated widely with palynologists in other laboratories in Europe. He was an active participant of

CIMP meetings as a coordinator of the Westphalian palynology working group, the PPMB organization (Palynologists and Plant Micropalaeontologists of Belgium), and the UPRESA 8014, Centre National de la Recherche Scientifique. During his long career in the Lille laboratory he published in excess of 120 papers. His scientific work was appreciated by publishing the PPMB Special Issue in Honour of Dr. Stanislas Loboziak, when he was retired in December 2001 (partly after Servais *et al.*, 2001; Owens, 2002 and Steemans *et al.*, 2002).

Dr. Stanislas Loboziak died suddenly on 1st June 2002, only few months after retiring from the Université des Sciences et Technologies de Lille as Research Associate of the CNRS at the Department of Paleozoic Palaeontology and Palaeogeography (UPRESA 8014 of the CNRS).

Dr. Loboziak was very precise and honest in his scientific work. He was always ready to help his colleagues, offering his knowledge and experience. He maintained numerous international relationships and was specially engaged with Polish researchers.

REFERENCES

- DYBOVA-JACHOWICZ S. and JACHOWICZ A. (2003) – Paleobotanika. Wyd. Uniwersytetu Łódzkiego, Katowice.
- GÓRKA H. (1969) – Microorganismes de l'ordovicien de Pologne. *Palaeont. Pol.*, **22**: 1–97.
- GÓRKA H. (1971) – Sur les Melanosclerites extraits des galets erratiques ordoviens de Pologne. *Bull. Soc. Geol. Miner. Bretagne*, **173** (5): 399–406.
- JACHOWICZ A. (1966) – Microfloristic characteristic of the deposits of the Lublin Carboniferous (in Polish with English summary). *Pr. Inst. Geol.*, **44**: 104–134.
- JACHOWICZ A. (1966) – Microspores *Tripartites* from Namurian deposits in Upper Silesia (in Polish with English summary). *Pr. Inst. Geol.*, **46**: 105–194.
- JACHOWICZ A. (1972) – A microfloristic description and stratigraphy of the productive Carboniferous of the Upper Silesian Coal Basin (in Polish with English summary). *Pr. Inst. Geol.*, **61**: 185–277.
- JACHOWICZ A., UTTING J. and JACHOWICZ M. (1989) – Palynology of the Lower Carboniferous Emma Fiord Formation of Devon, Axel Heiberg, and Ellesmere Islands, Canadian Arctic Archipelago. *Geol. Surv. Canada, Bull.*, **396**: 145–171.
- LOBOZIAK S. and STREEL M. (1981) – Miospores in Middle-Upper Frasnian to Famennian sediments partly dated by conodonts (Boulonnais), France. *Rev. Palaeobot. Palynol.*, **34**: 49–66.
- LOBOZIAK S. and STREEL M. (1989) – Middle-Upper Devonian Miospores from the Ghadamis Basin (Tunisia-Libia): Systematics and Stratigraphy. *Rev. Palaeobot. Palynol.*, **58**: 173–196.
- LOBOZIAK S. and MELO J. (2000) – Miospore events from late early to Late Devonian strata of Western Gondwana. *Geobios*, **33** (4): 399–407.
- LOBOZIAK S., MELO J. H. G., PLAYFORD G. and STREEL M. (1999) – The *Indotriradites dolianitii* Morphon, a distinctive group of miospore species from the Lower Carboniferous of Gondwana. *Rev. Palaeobot. Palynol.*, **107** (1–2): 17–22.
- OWENS B. (2002) – Dr Stanislas Loboziak. *Palynos*, **25** (1): 14–15.
- SERVAIS T., STEEMANS P. and STREEL M. (2001) – Dr. Stanislas Loboziak (Lille, France) retires. *Palynos*, **24** (2): 5–6.
- STEEMANS P., SERVAIS T. and STREEL M. (2002) – Paleozoic Palynology: a special issue in honour of Dr. Stanislas Loboziak. *Rev. Palaeobot. Palynol.*, **118** (1–4).
- STREEL M., THOREZ J., CAPUTO M. V., LOBOZIAK S. and MELO J. H. G. (2000) – Palynology and sedimentology of laminites and tillites from the Latest Famennian of the Parnaíba Basin, Brazil. *Geol. Belgica*, **3** (1–2): 87–96.