phot. G. Worobiec

This volume is dedicated to
Professor ***Magdalena Ralska-Jasiewiczowa***

Professor Magdalena Ralska-Jasiewiczowa – in seventieth anniversary of birthday

Prof. Dr. Magdalena Ralska-Jasiewiczowa was born on December 11, 1934 in Kraków, and all her life has been bound up with this city. After completing elementary school, she continued her secondary education at the high school run by the Ursuline Sisters, and when the school was closed by the political authorities, she attended the Queen Wanda High School, which met the same fate, so she finally graduated from the Society of the Friends of Children (TPD) Secondary School, where she took her finals in 1951. Alongside her general education, she received primary and secondary musical education in the piano class. Her fondness of music was always present in her family, and she shared it with her husband Adam Jasiewicz, whom she married in 1957, a botanist by profession but a great lover of music – an amateur singer endowed with beautiful bass voice. Her son Adam, born in 1963, is a conservator of art works and a keen collector of opera music recordings.

Prof. Ralska-Jasiewiczowa followed natural-history traditions that were well established in her family. Her father, Edward Ralski, was a professor of agriculture. Unfortunately, he could not share his knowledge directly with his daughter, because he was called up in 1939, and together with other Polish officers he was captured by the Soviet NKVD and murdered in Starobielsk POW camp in 1941. However, the experimental plot he had managed to create in his home garden before World War II was Magdalena's earliest childhood memory. Also her mother, Magdalena Ralska, an agriculturist with specialisation in horticulture, promoted the interests of her family in natural history. Her father's brother, Eugeniusz Ralski, a specialist in plant pathology, used to visit the home of the Ralski family after the war. The atmosphere of the family home must undoubtedly have influenced an interest in botany of young Magdalena, our future distinguished scientist.

Prof. Ralska-Jasiewiczowa studied from 1951 to 1956 at the Faculty of Biology and Earth Sciences, Jagiellonian University. She graduated in February 1956 with a Master's degree in biology, specialisation in the field of Quaternary palaeobotany. Her Master's thesis, written under the supervision of Prof. Dr. Jadwiga Dyakowska, was on the pollen analysis of Middle Polish glaciation at the site Łabędy in Upper Silesia (1958). Soon after she had completed her studies she started work at the Department of Palaeobotany at the Institute of Botany, Polish Academy of Sciences in Kraków on April 1, 1956. It was in the Institute where she went through all the stages of her professional career, from a technical assistant, through research posts of assistant, senior assistant, lecturer, assistant professor (docent) to the post of associate professor in 1990, and full professor in 1995. Her professional promotion was connected with having been awarded a Ph.D. degree in natural sciences at the Institute of Botany, Polish Academy of Sciences in 1965, habilitated Doctor's degree in natural sciences in 1979 at the Jagiellonian University, and a scientific title of professor in 1990.

In the early period of her professional career, Prof. Ralska-Jasiewiczowa was engaged in the problems of the Pleistocene, which found expression in her first publications (1958, 1960). At the same time she broadened her knowledge of floristics and phytosociology by taking part in geobotanical field research conducted by Adam Jasiewicz in the Bieszczady Mountains. Under the influence of botanical observations made during those trips, Prof. Ralska-Jasiewiczowa got interested in the history of vegetation of this mountain range, an interest that soon expanded into other areas. It finally resulted in developing her main field of research, which included a broad range of palaeoecological problems connected with the Late Glacial and Holocene. Her expert knowledge of the contemporary vegetation communities and ecological requirements of

plants, combined with a perfect command of pollen and macrofossil analysis, has been reflected in a profound scientific interpretation of changes recorded in pollen diagrams, so characteristic of all her publications. She improved her knowledge during professional training periods at the palaeobotanical laboratory at the Natural History Museum in Copenhagen under the supervision of Dr. J. Troels-Smith (1969), and the Botany School in Cambridge (1983).

Prof. Ralska-Jasiewiczowa focused her early research work on two opposite areas of east Poland. In 1959 she took the first profile for pollen analysis from a mire Wołosate in the Bieszczady Mountains, and in 1960 she undertook a study of bottom sediments of the Mikołajki Lake in the Masurian Lake District. The study carried out in these regions resulted, apart from a number of publications devoted to selected problems in 1964–1982 and then in two monographs on the history of vegetation in the eastern part of Poland for the period from the late glacial of the last glaciation until present times. A study of the Masurian Lake District, published in 1966, served the basis for her Ph. D. degree. The dissertation on the history of vegetation of the Western Bieszczady Mountains (1980) resulted in her habilitation in 1979.

In her numerous publications, Prof. Ralska-Jasiewiczowa devoted much of her attention to the aspects of human impact on natural vegetation. The examination of the Holocene sediments carried out by means of pollen analysis demonstrated beyond doubt that it was farmers who gradually destabilized the landscape at that time. The differentiation between the transformations of the environment caused by natural factors and those made by human activity was and still is the subject of debate in the world palynological literature and confrontation with the results of archaeological findings. Prof. Ralska-Jasiewiczowa participated in the European discussion of the subject with her research papers.

While working on the transformations of the forest cover of lake districts, she discovered a connection between the periodicity of hornbeam expansion and the phases of destruction of forest ecosystems caused by the settlement of successive prehistoric cultures. She proved that this species, due to its ecological properties, could settle post-farming areas more easily than other deciduous trees (1964). The growing interest in the problems of the relations between prehistoric people and the environment stimulated close collaboration with archaeologists, resulting in numerous publications revealing by pollen analysis the impact of man on vegetation. They include, among others, the review of traces of prehistoric settlement in pollen diagrams from all of Poland (1968, 1977) and palynological evidence of the presence of different prehistoric cultures in the Polish Carpathians (among others, 1969, 1970, 1972, 1972, 1977). The Carpathian studies were of great significance, as it was believed for a long time, due to the lack of archaeological data, that the Carpathians were not settled until the early Middle Ages.

To develop this field of interest, Prof. Ralska-Jasiewiczowa joined archaeologists, palaeolimnologists, and representatives of other fields of natural sciences in extensive interdisciplinary research work carried out in the region of the centre of the Łużyce culture in Woryty in the Olsztyn Lake District. The research showed the impact of prehistoric settlement on vegetation and the whole environment, as well as the evolution of lakes as such. The results were presented in some fragmentary publications (Dąbrowski & Ralska-Jasiewiczowa 1976, Cieśla, Ralska-Jasiewiczowa & Stupnicka 1978, Dąbrowski, Ralska-Jasiewiczowa & Stupnicka 1982) and a collective publication edited by J. Dąbrowski in 1981.

An important stage in the professional career of Prof. Ralska-Jasiewiczowa was launching a ten-year international research programme "Palaeohydrology of the Temperate Zone during the Last 15 000 Years, Subproject Lake and Mire Environments" in collaboration with Prof. B.E. Berglund (Lund University, Sweden). This project was carried out within the framework of the International Geological Correlation Programme No. 158, subproject 158 B. The aim of the project, including the temperate zone of Europe, was to study palaeoecological changes that took place during the last 15 000 years based on the examination of mire and lake sediments. Prof. Ralska-Jasiewiczowa was the secretary of the international committee of the subproject 158 B and a national coordinator for Poland. Her strenuous work contributed enormously to the success of the project. The project resulted in numerous, detailed research papers worked out with the use of uniform methodological assumptions (*Acta Palaeobotanica* 1982, 1987), as well as two books, a manual of methods – *Handbook of Holocene palaeoecology and palaeohydrology*

(editor B.E. Berglund, associate editor M. Ralska-Jasiewiczowa, first edition 1986, second edition 1990) and a synthesis of the project's results – *Palaeoecological events during the last 15 000 years – Regional syntheses of palaeocological studies of lakes and mires in Europe* (editors B.E. Berglund, H.J.B. Birks, M. Ralska-Jasiewiczowa & H.E Wright, 1996). This programme played a major role in the development of Polish palynology, as it contributed to popularising modern palaeoecological methods in all national centres engaged in pollen analysis. After completing the programme, Prof. Ralska-Jasiewiczowa, taking advantage of the fact that the source material for the programme had been prepared in a uniform way, compiled the Polish Palynological Database for the Late Glacial and the Holocene, which has become a part of European Pollen Database (EPD) operating in Arles, France. In the years 1989–1999 Prof. Ralska-Jasiewiczowa was a member of the programme council of EDP.

In the early 1980s an interest in the isopollen method, introduced to palynology by Prof. Władysław Szafer in 1935, was revived in Europe. This method used the results of pollen analysis for a cartographic presentation of plant species migration in the past. However, for a long time it was not applied in the studies of the history of vegetation because, apart from pollen analysis, it required a dating method, which was then unavailable. It was the introduction of the radiocarbon method that opened new opportunities for using the isopolls. In the 1980s, when British researchers took the initiative in compiling an atlas of trees and shrubs migration in Europe, they invited Prof. Ralska-Jasiewiczowa to participate in this undertaking. Basing on the then available ^{14}C and very detailed interpolation, she could implement isopolls to present the migration of main forest trees in Poland in the last 12 000 years. This study, published in *New Phytologist* in 1983, appeared a few months before an isopoll atlas for Europe compiled by a British team (Huntley & Birks 1983) and therefore gained a pioneering position in Europe.

Special attention should be paid to a study of the laminated sediments of Lake Gościąż situated about 80 km NW of Warszawa. The discovery of perfectly preserved annual laminations from the period of the last 13 000 years aroused the interest of many specialists. In 1987, on the initiative of Prof. Leszek Starkel, a team affiliated with the National Committee for Quaternary Research of the Polish Academy of Sciences was established under the supervision of Prof. Ralska-Jasiewiczowa. The team consisted of 28 researchers from Poland and abroad, representing palaeoecology, geophysics, sedimentology, and other fields of geosciences, as well as researchers engaged in work on the contemporary environment. Prof. Ralska-Jasiewiczowa herself performed pollen analysis of the main lake cores and described the history of vegetation. These multidirectional studies enabled the reconstruction of the changes of the environment and the climate in the Late Glacial and Holocene, based on the calendar age scale for the first time in east-central Europe. A wide range of research problems dealing with the sediments from this lake found its expression in 30 papers, published in the years 1989–2003 in Polish and foreign journals. The fundamental monographic study of the site appeared in 1998.

The truly prodigious scientific output of Prof. Ralska-Jasiewiczowa comprises 110 scientific publications (not to mention numerous abstracts and reports), as well as editorial work of 10 books and separate volumes of periodicals devoted to chosen problems in the field of palaeoecology. The international importance of her research work has been highly ranked in the Science Citation Index.

Prof. Ralska-Jasiewiczowa has participated in many international undertakings, such as the programme of the European Science Foundation entitled "European Palaeoclimate and Man"(1994), Programme IGCP – 253 "Termination of the Pleistocene" (1992), "European Lake Drilling Project" (ELDP) under the auspices of European Science Foundation, and the Polish-Slovakian-Ukrainian project "First Shepherds and First Farmers in the Eastern Carpathians" (1994). She has taken an active part in many international conferences and congresses, often acting as coorganiser of those events.

Having gained recognition as an eminent researcher, Prof. Ralska-Jasiewiczowa was and is a member of several scientific organisations in Poland and abroad, such as the INQUA Committee for the Study on the Holocene, Palaeodemographic Section of the Demographic Committee of the Polish Academy of Sciences, Committee for the Study on the Quaternary of the Polish Academy of Sciences, Palaeogeography Commission of the Polish Academy of Arts and Sciences,

National Committee IGBP, Commission of the Carpathians Prehistory, Advisory Board for European Pollen Database, Organisational Committee of International Palaeolimnologic Symposia, The Board of W. Szafer Foundation of Polish Botany. She is also a member of the Editorial Boards of the *Journal of Palaeolimnology, Acta Palaeobotanica*, and *Studia Quaternaria*.

She has always shared her profound knowledge with young scientific researchers from Poland and abroad who have had their professional training at the Institute of Botany, Polish Academy of Sciences. She has also been a supervisor of Master's theses of Jagiellonian University students, as well as a supervisor of a few doctoral theses. She has led excursions for assistants and post graduate students of foreign universities and lectured at universities in Oulu in Finland, Lund in Sweden, several research institutions in the United States, and the European University Centre for Cultural Heritage in Ravello.

Carrying out research work, discovering and explaining the mysteries of the vegetation of the past, its climatic conditioning in relation to the history of man on our land have always been the subject matter of her research passion, to which she committed herself genuinely and with profound knowledge. She successfully managed to combine her professional career with her family life, in which she nursed her seriously ill husband with full devotion and heroism for many years, which earned her respect among all those who were in contact with her. Prof. Ralska-Jasiewiczowa, an excellent companion of field research and a helpful colleague, has spared no time to help solve problems arising in the everyday research work of all those who work with her at the Department of Palaeobotany in Kraków, as well as those visitors who come from other centres.

We wish her every success in her future research work, and we sincerely hope that for many years we will benefit from her kind and invaluable help.

Translated by Barbara Lagan-Biernat

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