



PROFESSOR DOCTOR KRYSZYNA KONECKA-BETLEY (1922–2014)

On September 9th, 2014, Professor Krystyna Konecka-Betley passed away at the age of 92. She spent her whole professional life at the Warsaw University of Life Sciences (SGGW). She began her work at the Institute of Soil Science of the SGGW under the supervision of Prof. Arkadiusz Musierowicz in 1947, when she was still a student of the Horticulture Faculty of the SGGW. After receiving her Engineering Master's degree in 1950, she was employed at the Physics and Chemistry Laboratory of the Institute of Soil Science and Plant Cultivation (IUNG), located within the Institute of Soil Science of the SGGW. In 1960, she received her PhD in Agriculture and Forestry Science from the Faculty of Agriculture of the SGGW based on her dissertation entitled "Study of the sorptive complex of the soils derived from boulder clay in relation to their genesis." In 1964, she was transferred to the Institute of Soil Science of the SGGW at the rank of adjunct. In 1967, she received the degree of habilitated doctor (DSc) of soil science based on the habilitation thesis entitled "The issue of iron in the soil formation process." In 1978, she received the title and rank of Associate Professor and in 1989 the title and rank of Full Professor.

She completed scientific training at the following institutions: Agricultural University in Prague; Department of Forestry of the Humbolt University in Eberswalde near Berlin under the supervision of Prof. Ewald; Rostock University under the supervision of Prof. Reuter.

Prof. Konecka-Betley was active in various committees and councils of the University. In years 1973–77, she served as deputy director for scientific affairs

at the Institute of Soil Science and Agricultural Chemistry of the SGGW and from 1977 until 1982 she was the chair of the Department of Genesis and Formation of Soils within the Institute of Soil Science. In 1984, she became the associate dean for student affairs of the Faculty of Agriculture.

Main fields of research conducted by Prof. Konecka-Betley were the genesis and typology of soils, fossil and relict soils, as well as applied soil science with special interest in cartography and environment protection. She was also concerned with the physical, chemical and mineral indexes of evaluating the directions and progress of soil formation processes.

Prof. Konecka-Betley was particularly interested investigating relict and fossil soils of the Holocene and Pleistocene with an additional minor interest in older soils derived from loess and sand dune from the Warsaw region or clay-derived soils, mainly from the mid-Poland glaciation. She considered these formations to be the indexes of the stratigraphy of the Quaternary. Based on the radio-carbon dating of the organic matter, as well as the thermoluminescence of the mineral matter of the soils, she attempted the reconstruction of the natural environment of middle Poland in the late glacial period and Holocene.

Her first publication – discussed with Prof. Musierowicz – regarding the fossil soils derived from loess, entitled “The typology of fossil soils on the example of Nielepów” appeared in 1968. It marked the beginning of the “paleopedological school” in the Soil Science Department when Prof. Konecka-Betley was joined by younger colleagues, such as Danuta Czępińska-Kamińska, Elżbieta Janowska, Małgorzata Okołowicz and Zbigniew Zagórski. Beyond the above work, among the most prominent were: “Diagnostic horizons of the mid-loess fossil soils of southeastern Poland” (1976), “Relict soils derived from carbonate rocks in the Świętokrzyskie Mountains region and their surrounding areas” (1976), „Soils of dune areas of central Poland in late glacial and Holocene” (1977), a chapter in “Man and the environment in the ancient times” (1983), a chapter in „Weathering: its Products and Deposits” (1989), “Late Vistulian and Holocene fossil soils developed from aeolian and alluvial sediments of the Warsaw Basin” (1991), ”Fossil soils of late Pleistocene developed from loesses” (1994), „Micromorphological differentiation of the top part of the Warta and Odra glacial till complexes” (1995), „Paleosols as units of Quaternary stratigraphy” (2002). In 2002, her work regarding fossil soils were collected and published in the book „Paleopedology Problems in Poland.” Her latest publication appeared in 2012.

Prof. Konecka-Betley spent many years on complex research on the environment of the Kampinoski National Park (KPN). In the 1970's, a study was conducted concerning the subject of “Changes occurring in the soil and habitat environments of the Kampinoski National park under the influence of anthropo-pressure”, which was coordinated by the Polish Academy of Sciences (PAN). Most of the faculty of the Institute of Soil Science, as well as micro-bi-

ologists and phytosociology participated in the study. Many manuscripts were written, which were published in two volumes edited by Prof. Bohdan Dobrzański and Prof. Krystyna Konecka-Betley. The publication was entitled “The influence of human activity on the soil environment of the Kampinoski National Park”. Volume I was published in 1983, while Volume II appeared in 1986. In addition, created was an unpublished KPN map of soils in the scale 1:25000.

The research in the Kampinoski National Park continued as part of two grants financed by the Committee for Scientific Research (KBN), initiated and managed by Prof. Konecka-Betley, entitled: “Forecasting of the changes in chemical properties of the soils of the Kampinoski National Park in comparison with other components of the natural environment” (1993–2000). It was an interdisciplinary theme with a dynamic approach, which was related to the impact of human activity on the natural environment. Studied were the soils, waters, selected plants and some air components. The research continued within subsequent themes in cooperation with the College of Ecology and Management in Warsaw in years 2000–2005. Several publications appeared as a result, which concerned the characteristics of the soils of the fully and partially protected area of the Biosphere Reserve “Puszcza Kampinoska”, iron and aluminum forms, as indexes of the soil formation processes in these soils, as well as the distribution of the phosphorus fraction in these soils.

Important part of Prof. Konecka-Betley’s scholarly work was the research on soils and plants in the main research problem of the Forestry Research Institute, entitled “The impact of water amelioration on the physical and chemical properties of soils and selected physiological processes of deciduous plants” (1973–1980). Prof. Konecka-Betley managed a large team and cooperated with the Department of Plant Physiology, Department of Botany and Microbiology.

Prof. Konecka-Betley participated in the research on urban soils and forecasting of their development and changes within the group theme „The Białoleka Dworska Experiment” (1976–1979) in cooperation with the Institute of Environmental Development.

Prof. Konecka-Betley developed an exceptional body of scholarly work. She was an author or co-author of approximately 170 scientific publications, including a co-authorship of the “Soil Science” textbook in several editions (1981, 1995, 1999) and scripts for the Department of Forestry. She was also a co-author of the map of the soils of Poland in the scale 1:300 000 and later in the scale 1:500 000. She also developed a map spec of a part of the Łęczycki region in the scale 1:25 000. Together with R. Truszowska, she developed a map of the soils of Poland in the scale 1:1 000 000 for the text by Prof. A. Musierowicz entitled “Detailed Soil Science”. Prof. Konecka-Betley and R. Truszowska also co-authored the school map in the scale 1:700 000 and the map of the soils of Poland in the scale 1:200 000 for the Geographic Atlas.

Prof. Konecka-Betley had an exceptional ability to engage for various scholarly projects large research teams, which, beyond the soils scientists, also included geologists, botanical scientists, ecologists, plant physiologists, forestry scientists, phytosociology, physicists and melioration specialists. Due to this cooperation, she was able to use in her individual and co-authored work various advanced and innovative methods, such as micromorphology, pollen analysis, electron microscopy,  $^{14}\text{C}$  and thermoluminescent dating, statistical methods, and others. She inspired her co-workers to engage in research, which later served as basis for pursuing and achieving scientific degrees. She was always ready to provide in-depth consultation to anyone who sought such help.

Prof. Konecka-Betley remained highly active until her passing and made her knowledge available to younger colleagues. She also continued to publish synthesized manuscripts, such as “Complex genesis of silty soils (lessivés)” (2009) and “Late-Glacial and Holocene period fossil soils of the middle Vistula river region, dated with  $^{14}\text{C}$ ” (2012).

Prof. Konecka-Betley was a member of the Polish Society of Soil Science (PTG) and the International Union of Soil Science Societies (IUSS). For three terms, she served as the secretary of the headquarters of the PTG. She was also the chair of the Warsaw division of the PTG. She actively participated in editing “Systematyka Gleb Polski” (Systematics of Polish Soils). She co-organized congresses and conferences. She was the editor-in-chief of *Soil Science Annals* for 10 years and later remained actively involved in the editorial board providing support to subsequent editors of this journal. The PTG, in recognition of her service, awarded her the title of the Honorary Member of the PTG. She worked for the Committee for Quaternary Research of the Polish Academy of Sciences (PAN) and for the Paleopedology Committee of the INQUA. For multiple terms, she was a member of the Scientific Council of the Kampinoski National Park.

For her accomplishments and engagement in scientific, educational, and mentorship work, Prof. Konecka-Betley received numerous awards and recognitions on both the academic and the national level. She received the Silver Cross of Merit, the Gold Emblem of the PTG, Knight’s Cross of the Order of Polonia Restituta, gold honorary emblem for Service for the SGGW, gold emblem of merit for her service for the environmental protection and water management and the Medal of the National Education Committee (Medal Komisji Edukacji Narodowej). She received there scholarship awards of the V Department of the PAN, two second-degree team awards and the individual first-degree award of the Minister of Education, Higher Education and Technology.

It is not possible to mention even those most important qualities and accomplishments of Prof. Krystyna Konecka-Betley in a short biographic note. She was an honorable, collegial, direct and honest person in her relations with others and she emanated life energy and optimism, as well as a constant creative passion.

Her passing leaves an empty space which will be difficult to fill, but she has also left a standard of personality, which is worthy of following.

May she forever be remembered,

*Danuta Czepińska-Kamińska*  
*Wojciech Kwasowski*