

# Professor Tomasz ‘Zielu’ Zieliński – an outstanding Polish sedimentologist: biography, scientific achievements, hobbies and publications

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## Outline of the biography

Professor Tomasz Zieliński was born on October 3, 1952 in Starachowice. He also attended primary and secondary school there. Then, in the years 1971–1976, he studied at the University of Warsaw, specializing in Quaternary geology. He completed his studies with a M.Sc. thesis entitled “Quaternary of the Suchedniów region (northern margin of the Holy Cross Mountains)”, which he wrote under the supervision of prof. L. Lindner.



**Fig. 1.** Professor Tomasz Zieliński during a field seminar dedicated to the 70<sup>th</sup> anniversary of his birth, Ślesin 2023 (photograph by M. Widera).

In years 1976–2005, he worked at the University of Silesia. During this time, in 1987, he first defended his Ph.D. thesis entitled “The sedimentary environment of proglacial deposits on the example of selected outcrops of the Suwałki Lake District, the Sieradz Basin and the Silesian Upland”. It was prepared under the supervision of prof. A.K. Teisseyre. Then, in 1997, based on two monographs (“End moraines of NE Poland – sediments and depositional processes”, “Outwash plains of NE Poland – sediments and depositional processes”) and other scientific achievements, Tomasz Zieliński received a habilitation degree.

In 2005 he moved to Poznań, where he was employed as a professor at the Adam Mickiewicz University. Soon, in 2007, Tomasz Zieliński became a full professor. Currently, he still works at this university as a professor emeritus.

## Administrative and scientific functions

While working at the University of Silesia, Tomasz Zieliński was the head of the Department of Sedimentology. In turn, at Adam Mickiewicz University, he held the positions of head of the Cenozoic Research Department and deputy dean of the Faculty of Geographical and Geological Sciences.

In the years 1993–2015, he was a member of the Committee for Quaternary Research of the Polish Academy of Sciences. For 17 years he has been the



**Fig. 2.** Professor Tomasz Zieliński as deputy dean of the Faculty of Geographical and Geological Sciences (photograph: AMU archive).

Editor-in-Chief of the international geological journal *GEOLOGOS*.

### Scientific achievements

Tomasz Zieliński's scientific activity covers mainly two areas of sedimentology of clastic rocks – studies of the glaciogenic environment and the fluvial environment. First, he analysed the sedimentology of glaciomarginal deposits in the Holy Cross Mountains and the Silesian Upland. Over time, he moved his research to the Bełchatów opencast lignite mine in central Poland. The extent of the outcrop (one of the largest in Europe) and the continuous movement of mining walls made it possible to study the vertical and horizontal successions of huge fluvial series and determine the variability of sedimentary subenvironments.

Then he moved his studies to the “classic” Pleistocene glacial areas of the last glaciation – to the area of north-eastern Poland. Based on research in this young-glacial area, he determined the indicator features of end moraine deposits and interpreted their formation as the fossil record of terminoglacial fans. Comparison of the depositional style of Pleistocene outwashes in Poland and modern ana-

logues in Iceland and Alaska allowed for the thesis that these outwashes differ significantly, which was driven by different geomorphological and hydrological conditions of the Polish Lowlands and the Arctic.

As a member of an interdisciplinary team, he also studied the Narew River valley on the plain of north-eastern Poland, which turned out to be the best present-day example of an anastomosing river not only in Poland, but throughout Europe. In the 1990s, a unique discovery was made in Krasiejów in Opole Silesia. A rich fauna of Late Triassic vertebrates was found there, including the oldest dinosaurs. There was a problem of interpreting the environment in which vertebrates lived. The results of sedimentological analysis allowed him to put forward the thesis that it was the floodplain of the anastomosing fluvial system. Tomasz Zieliński was also interested in fore-mountain rivers when in 1997 the Sudetes region was hit by a catastrophic flood. He then proved the sudden metamorphosis of the fluvial environment into a typical braided river.

Professor Tomasz Zieliński, in addition to his favourite Pleistocene, Holocene and Triassic fluvial environments, also played a very important role in the study of Neogene river systems. Together with his collaborators, he provided convincing evidence for the terrestrial, i.e. fluvial, origin of the so-called Poznań Clays – one of the most famous late Neogene lithostratigraphic units in the Polish Lowlands. Moreover, he participated in the discovery and research of the first crevasse-splay microdelta occurring in the lignite-bearing Miocene of Poland.

### Other interests – hobby

Tomasz Zieliński practices tourism, both in the mountains and in the lowlands. He prefers rocky carbonate massifs, especially those where ferratas can be found. He always combines his mountain trips with exploring interesting geological formations. However, he travels through the lowlands on a bicycle. He likes bushcraft in wild places that can still be found in Poland. His camera accompanies him on every trip. He is also interested in architecture, both old and modern. If we add good alcohol to this, they complete the wide spectrum of his hobbies.



Fig. 3. Tomasz Zieliński while mountain climbing in his favourite Italian Dolomites (left). The easiest way to get to bushcraft is by bike. Tomasz Zieliński on a wild camp in the Drawska Forest (right).

## The most important publications of Prof. Tomasz Zieliński

(in order of year of publication)

### Books

Zieliński, T., 1992. Moreny czołowe Polski północno-wschodniej – osady i warunki sedymentacji [End moraines of NE Poland – sediments and depositional processes]. *Prace Naukowe Uniwersytetu Śląskiego* 1325, 95 pp.

Zieliński, T., 1993. Sandry Polski północno-wschodniej – osady i warunki sedymentacji [Outwash plains of NE Poland – sediments and depositional processes]. *Prace Naukowe Uniwersytetu Śląskiego* 1389, 96 pp.

Racki, G., Bardziński, W. & Zieliński, T., 1999. Z kamiennej księgi pradziejów Górnego Śląska – Przewodnik geologiczny [The stone book of the prehistory of Upper Silesia – Geological guide]. Silesian University, Katowice, 168 pp.

Zieliński, T., 2014. Sedymentologia. Osady rzek i jezior [Sedimentology. Deposits of rivers and lakes]. University Press AMU, Poznań, 594 pp.

### Articles

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Pisarska-Jamroży, M. & Zieliński, T., 2014. Pleistocene sandur rhythms, cycles and megacycles: Interpretation of depositional scenarios and palaeoenvironmental conditions. *Boreas* 43, 330–348.

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