

**ASCENT OF QUATERNARY GEOLOGICAL, ENVIRONMENTAL
HISTORICAL AND GEOARCHEOLOGICAL RESEARCH AND
EDUCATION AT THE DEPARTMENT OF GEOLOGY AND
PALEONTOLOGY, UNIVERSITY OF SZEGED, HUNGARY
FOREWORD TO THE SPECIAL EDITION OF ARCHEOMETRIAI
MŰHELY***

**A NEGYEDIDŐSZAKI GEOLÓGIA, KÖRNYEZETTÖRTÉNET ÉS RÉGÉSZETI
GEOLÓGIA OKTATÁSÁNAK ÉS KUTATÁSÁNAK FELEMELKEDÉSE A
SZEGEDI FÖLDTANI ÉS ÓSLÉNYTANI TANSZÉKEN
– BEVEZETŐ GONDOLATOK A KÖTETHEZ**

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„1. To everything there is a season, and a time to every purpose under the heaven”.

„5. A time to cast away stones, and a time to gather stones together;”

King James Version: Ecclesiastes Chapter 3

„1. Mindennek rendelt ideje van, és ideje van az ég alatt minden akaratnak.”

„5. Ideje van a kövek elhányásának és ideje a kövek egybegyűjtésének”

Prédikátorok könyve, 3. fejezet (Károli Gáspár fordítása)

Abstract

The 2019 closing volume of Archeometriai Műhely co-edited by the Department of Geology and Paleontology, University of Szeged, Hungary is dedicated to its centennial re-establishment in 1921. After the Trianon treaty, the university moved to Szeged from Kolozsvár (Cluj-Napoca, Romania). Professors and faculty members of the old geology departments were to build up a new scientific line of research and education in Earth Sciences of the Carpathian Basin while keeping the Kolozsvár traditions as well. Following the path outlined by the founding fathers of the new school, the past 20 years witnessed a significant development under the umbrella of a new faculty and head of department. New instruments, laboratory facilities have been acquired and new labs established, thanks to the generous support of various research grants. Numerous papers have been published in prestigious international journals and books all related to research done in the field of Quaternary geology, environmental history and geoarchaeology. Thanks to the interim scientific developments and the newly established international connections and emerging collaborations results of research are continuously published in D1, Q1 journals. In addition, the department is hosting a significant number of international PhD students as well. The initial focus of research was constrained to the wider surroundings of the Carpathian Basin and recently has been complemented by works addressing questions on global scale. This opening to the international community in research and education will be the major focus of the next 5-7 years which will also witness the time of necessary changes in leadership at the department expressed in the order of authors of the foreword as well.

Kivonat

Az Archeometriai Műhely 2019 évi záró számát a Szegedi Tudományegyetem Földtani és Óslénytani Tanszéke jegyzi. A tanszék jövőre lesz 100 éves: Jogelődünk a trianoni döntés értelmében 1921-ben költözött Kolozsvárról Szegedre és fogalmazta újra önmagát, tudományos küldetését és kezdett bele a Kárpát-medence kutatását középpontba helyező tudományos megközelítés kialakításába. Az elmúlt 20 év során az alapító okiratokkal és az alapító egyéniségek elképzeléseivel teljesen összhangban lévő új tanszékvezetéssel az eddig elért eredményekhez

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képest jelentős előrelépést hajtottunk végre. Új laboratóriumokat alakítottunk ki, új műszereket szereztünk be sikeres pályázataink nyomán, és nemzetközi, hazai szinten vezető lapokban, átfogó könyvekben folyamatosan publikálni kezdtük főként a negyedidőszaki földtan és őslénytan, környezettörténet, és régészeti geológia területén elért eredményeinket. A tanszéki belső fejlődés és a külső nemzetközi kapcsolatok nyomán elértük, hogy folyamatosan a világ vezető lapjaiban publikálhatunk, jelentős számú hazai és nemzetközi PhD hallgatóval rendelkezünk, és nemzetközi kutatási projektekbe kezdhettünk. Kutatásaink ennek nyomán előbb a Kárpát-medence tágabb térségére terjedtek ki, legújabbán pedig már globális negyedidőszaki, környezettörténeti és geoarcheológiai kérdéskörökkel is foglalkozhattunk. A tanszékünkön lassan már 100 éve kialakított analitikus földtani és őslénytani tudományos iskola nemzetközi szintűvé válása jellemezi, előre láthatóan, az elkövetkező 5 éves időszakot is. Ebben az új szakaszban, legkésőbb 3-4 év múlva kerül sor a tanszékvezetésben egy újabb, az élet/az idő diktálta váltásra, amely már itt az összefoglaló cikkünk szerzői sorrendjében is megnyilvánul.

KEYWORDS: QUATERNARY GEOLOGY, PALEONTOLOGY, ENVIRONMENTAL HISTORY, GEOARCHAEOLOGY, HERITAGE SCIENCE AND NEW PERSPECTIVES

KULCSSZAVAK: NEGYEDIDŐSZAKI FÖLDTAN, NEGYEDIDŐSZAKI PALEONTOLÓGIA, KÖRNYEZETTÖRTÉNET, RÉGÉSZETI GEOLÓGIA, ÖRÖKSÉGVÉDELEM ÉS ÚJ PERSPEKTÍVÁK

The current volume of Archeometriai Műhely (2019/3) was compiled and co-edited by the Department of Geology and Paleontology, University of Szeged, Hungary. It is dedicated to the centennial re-establishment of the Department in 1921. In this foreword an attempt is made to overview the recent significant scientific achievements and technical developments of the past 20 years under the direction of the current leadership. The start was not without problems due to a major debt in the budget putting the department to the edge of survival 20 years ago. Changes in the leadership from 2000 onwards, partly dictated by temporal necessities, introduced new lines and perspectives in education and research, which was a last minute rescue belt to the department. It must be acknowledged, that possibilities have always been constrained by availability of funding and collective research and education aims of the institute hosting the department. Knowing these constraints, the new leadership of the department devised a long-term development plan with optimistic aims of ascending research and education of Quaternary geology, environmental history and geoarcheology to an international level placing the department in a leading role in the field. The present volume hosting papers written by members of the department as well as researchers, whose work is connected somehow is a demonstration of the outcome of these efforts.

The planned changes were perfectly in line with the ideas, work established by the founding declaration of the new department as well as the first professors. István Miháltz, the founding professor of the department as well as József Sümeghy, the first successful PhD candidate later becoming a leading senior research fellow in Hungarian Quaternary geology set excellent examples. The initial focus of research in the re-established Department of Geology was addressing questions of Quaternary sedimentological, paleo-environmental and geological evolution of the Great Hungarian Plain basin. This has been

extended to the area of geoarcheological research and multidisciplinary studies of archeological sites under the leadership of István Miháltz (1935). These were complemented by a new line of research fields due to newly established collaboration with researchers from the field of ecology, botany. Quaternary malacology (1935), anthracology (1936), palynology (1944), microfacies analysis using thin-sections (from 1952) are on the list. These fields were put into focus again from 2000 using new methodologies, know-how and instrumentation with aims to putting works into the streamline of international scientific research and education in the referred fields. Csanád Bálint, a Szeged born archeologist, member of the Hungarian Academy of Sciences has made a significant contribution to the development of the new laboratories and instrumentation of the department providing funding from an NKFP research grant brought to fruition by the collaboration of our department and the Institute of Archeology, HAS.

In addition, continuous applications for research funding and successful accomplishment of numerous projects, the adoption of absolute chronologies based on ^{14}C and other dating methods in Quaternary geological research provided a background to the continuous flow of publication of research results in internationally acknowledged, primary journals. These were especially prominent following the referred changes. The number of SCI, WOS indexed publications written by members of the department have significantly increased since 2000 (88 SCI, 32 additional international papers). In the period between 1921 and 2000 these numbers were lower (ca. 12-15) with most papers published in Hungary in English, German, French enabling the attainment of high international interests of contemporary geological research. Similar changes are notable in terms of the number of published monographs and book chapters from 2000 onwards (16 monographs, book chapters in international (25) and Hungarian (182) volumes, most of them in

English, 22 popular scientific publications, 34 proceedings, 67 Hungarian journal papers). These works received citations in 4600 international, more than 1000 Hungarian papers, monographs and book chapters in addition to 365 citations in PhD and academic doctoral theses. Due to these major improvements, the department is proudly hosting 7 Hungarian and 3 international PhD students during this academic year. The past 20 years also hosted 15 successful PhD defences, 107 graduate and undergraduate theses defences, and 15 National Student Scientific Competition contributions. A new post-graduate program has also been established in Geoarcheology for the first time in Hungary. 12 students of archeology has successfully gained degrees in the program so far. Members of the department has actively engaged in popular scientific outreach with 21 appearances in national and regional TV and radio programs (Mindentudás Egyeteme, Mindenki Akadémiája, Alma Mater, Science Cafe, Sciesta, Dugonics Fraternity). Short documentaries were made on geoarcheological, archeomalacological research, evolution of Lake Balaton, the landscape evolution of the Hortobágy, the reintroduction of wild horses and its archeobotanical, archeozoological aspects, as well as the geological evolution of a unique site with strong ties to the city of Szeged hosting a Paleolithic camp: Szeged-Öthalom (Five Hills). All these significant achievements granted us a possibility to sum up the results in the present special volume.

Besides successes, we also had some failures marked by the rejection of numerous carefully prepared high quality grant proposals due to technical and science political issues, conflicting interests with newly established research groups, laboratories leading to a ca. 10-year period of lack of funding in basic scientific research. Nevertheless, work has relentlessly continued reaching phase 5 planned originally. New collaborations have been established with Chinese, Estonian, Croatian, Polish, Turkish, American, Australian, New Zealand colleagues enabling us to participate in, and hand in international research grant proposals and publish our results in D1 and Q1 journals. This expansion to the web of global scientific research is to be the major focus of the following years. The next 5-7 years will also witness the time of necessary changes in leadership at the department expressed in the order of authors of the foreword as well. The new leadership will take on the role of carrying on the heritage and achievements made so far. Some aims include the introduction of English language education and reinforcement of the position of the department in international Quaternary geological, environmental historical, geoarcheological research. These efforts are all straight-line outcome of our centennial heritage.

Now is also the time to address the achievements of our distinguished retired professors who worked to maintain the original goals set by the founding fathers. The oldest member of the department Prof. emeritus Béla Molnár former HoD, age 85, Associate Professor Dr. Miklós Szónoky age 80 and Associate Professor Dr. János Geiger turning 66 and retiring this year are all necessary to be mentioned. Last December a special workshop was dedicated to their achievements. This occasion also allowed us to greet a friend and fellow paleontologist Ferenc Wanek (age 75) from the University of Kolozsvár, Transylvania, who has always been an active contributor to our work. The internationally acknowledged Quaternary malacologist, paleoecologist late Prof. Endre Krolopp was also an important member of the department often greeted. In 2014 a workshop was dedicated to the life and achievements of our founding professor István Miháltz. This is how the continuity between older, active and potentially future members of the department is established and maintained putting into existence of what is stated in the slogan adopted: '*Sine praeteritis futura nulla - there is no future without the past.*'

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