

THE THREE DECADES OF THE DEPARTMENT OF GEOLOGY, ATTILA JÓZSEF UNIVERSITY, SZEGED

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The independent existence of the Department began in the autumn of 1940, when with the splitting into two of the Department of Mineralogy and Geology, which had functioned since 1921, it was separated from the Department of Mineralogy and Petrography. As for the initial condition and aims of the Department at the moment of gaining independence, let us refer the reader to the paper of ISTVÁN FERENCZI [1943, 1944], as no paper of this kind has been written ever since. In the following discussion let us review the history of the Department, for its experience may provide evidence determining its future.

THE CHANGES IN THE TASKS OF EDUCATION

Before 1947 the Department had two tasks to fulfil in education. On the one hand, secondary school teacher candidates, to be specialized in natural history and geography, were taught geology and paleontology according to a syllabus prescribed by the Institute for Training Secondary School Teachers. On the other hand, the Departments was training those students in geology and paleontology, which would not obtain a secondary school teacher's diploma and were just listening to lectures and attending exercises they were interested in during their studies in the university. These students completed their studies by compiling their Ph. D. thesis and passing their examination for doctorate.

Of course the lectureships of the two different types of teaching overlapped often each other. In possession of university absolutorium the teacher candidates were allowed to prepare a Ph. D. thesis and pass an examination for doctorate, if they wished, and still had power enough for doing so after passing their compulsory examinations for the teacher's diploma, or even without having obtained this. This last-mentioned means of training was less favourable for specialization. And yet, it was rather popular for enabling one to obtain two diplomas at the cost of prolongating one's studentship for a little time. From the point of view of the educational policy, it had the advantage of providing the secondary schools with natural sciences teachers of a wide range of knowledge, familiar in the domain of mineralogy and geology as well. In addition, however, because of difficulties in finding proper jobs, most of the graduates which became later geologists, had begone their career as secondary school teachers, too.

This situation was fundamentally changed by the concentration of the training of geologists at the L. Eötvös University in Budapest and the Technical University

of Heavy Industry at Miskolc (1948). However, the Department under consideration was yet more sensibly affected by the stopping in 1954 of the (five-year) training of teachers specialized in geography and geology that was introduced in 1950. Since the afore-mentioned date the "ex offio" teaching activities of the Department have been reduced to participate in the foundational training of the various secondary school teacher's specializations (biology—geography, mathematics—geography, foreign language—geography and biology—chemistry) and to organize timely special courses. Consequently, the Department has been deprived practically of the possibilities to train oneself the specialists needed for the reinforcing of its own staff.

Only from 1964, this situation was altered in consequence of the claim to speeding up the training of specialists for study of flatlands and for hydrocarbon- and water-prospecting. Since that time the Department of Geology (in a common programme with the Department of Mineralogy, Geochemistry and Petrography) has allowed a few teacher candidates specializing in geography or biology or chemistry to obtain, after 3 years of education, a teacher's diploma in geology—chemistry, geology—geography or geology—biology, respectively. The education is facultative, being dependent on application and the Dean's permission. That is why courses of this kind are not started every year.

During the three years our students attend lectures (and take part in relevant exercises in practising) on general geology, historical geology, applied geology, general and systematic paleontology and the geology of Hungary on the one hand, and special courses in geophysics, hydrogeology, petroleum geology and geological mapping on the other.

The students participating in this special kind of education prepare their theses devoted to one of the geological disciplines. In general, they are trained in the domain of sedimentology so amply and thoroughly that they are entitled to carry out investigations of deep-drilling materials and analyses in laboratories of sedimentary petrography independently.

THE EQUIPMENT OF THE DEPARTMENT

30 years ago the equipment of the Department was rather poor, limited to a few microscopes and the most important instruments and devices necessary for working on the field (hand-operated drilling equipment) and in geological laboratories (chemical and granulometric analyses). The degree of equipment has since increased by leaps and bounds, particularly so in the last five years. The improvement of the Department's equipment enhances in the first place the possibility for conducting sedimentological investigations.

The Department's collections serving for both educational and research purposes, together with the demonstrating and documenting materials, have undergone a similarly significant progress. The old demonstrative plates have been replaced by a rich inventory of slides depicting the subject of every lecture being delivered. Even though the Department's collections cannot be amplified because of limitedness of the placement to such an extent as to cover the entire scope of the Department, efforts are being made to enhance their efficiency in their serving as a tool of education and as a model to work on before the students enter into service in practical life.

A special collection has been assembled to include primarily materials devoted to educational purposes for the students. In this collection the materials for visual

demonstrations, such as slides, thin- and polished sections, photographs and descriptions are represented by several copies.

A separate collection has been reserved for selected materials with photographs and written explanations giving a review of various subjects such as general and systematic paleontology, general geology (mainly sedimentology) and the geology of Hungary. This exhibition is of great significance also for public education, as no similar collection is available in the City Museum of Szeged. This fact also justifies the necessity to develop this collection into a duly illustrated, didactical exhibition which would be capable for fascinating a layman visiting it, that is into something like KOCH's Mineral Collection exhibited to the wide public at the Department of Mineralogy, Geochemistry and Petrography.

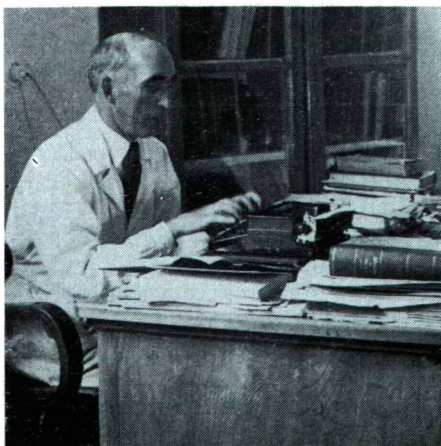
Finally, the research collection comprises the rock and fossil samples identified or used for comparisons by the staff of the Department.

To illustrate the development of the Department's Library, including both books and periodicals, let us recall that the number of books available at the Department at its birth 30 years ago was as low as 253 — a striking contrast to the 500 volumes growth of the last five years. The collection of off-prints has increased markedly too, attaining thrice the initial figure by the end of the third decade. Whereas 90% of the initial collection were papers of local, Hungarian, interest, the present-day collection embraces a comparatively wide spectrum of geology, paleontology and geophysics. The collection of periodicals has undergone a considerable progress, too. Whereas in 1940 the Department was receiving just a few journals, a total of 21 periodicals, Hungarian and foreign, are available to its staff now.

RESEARCH WORK

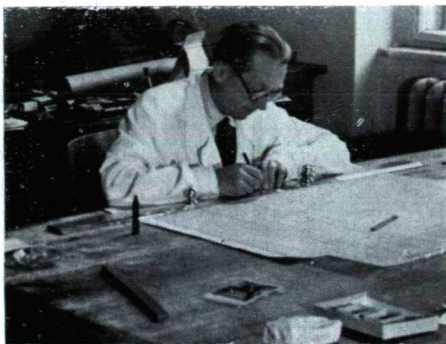
During the past 30 years the Department was directed by:

PROF. DR. ISTVÁN FERENCZI	from 1940 to 1944
ASSISTANT PROF. DR. ISTVÁN MIHÁLTZ	from 1944 to 1946
PROF. DR. FERENC HORUSITZKY	from 1946 to 1950
PROF. DR. ISTVÁN MIHÁLTZ	from 1950 to 1964
ASSISTANT PROF. DR. LÁSZLÓ JAKUCS	from 1964 to 1966
PROF. DR. KÁLMÁN BALOGH	since 1966



Prof. Dr.
Ferenc Horusitzky

Under the direction of the above, the members of the staff have from the very beginning conducted valuable scientific activities in spite of their modest number. The orientations and nature of these activities have been defined by the specialization and special scope of interest of the heads of the Department, by local conditions and by the requirements of practical life, all combined. Because of Szeged's situation in the Great Hungarian Plain (Alföld), most of these studies have been aimed at getting acquainted with the stratigraphy and lithology of the recent, Late Quaternary formations of the immediate vicinity and its wider environs. Undertaken by ISTVÁN MIHÁLTZ and his disciples, this work was connected with such vast projects as the canalization of the city of Szeged, defining the track of the Danube—Tisza Canal (which has not been executed as yet), locating the Tiszalök Hydroelectric Power Plant, and the Great Plain mapping programme launched by the Hungarian Geolo-



Prof. Dr. István Miháلتz

gical Institute, Budapest. Consequently, the economic funds for the reasearch work were provided by city planning, agricultural and water supplies management organizations. The great merit of MIHÁLTZ and his disciples consists in the precisising of the genetics of the 15 to 30 m thick epidermis of the Great Plain by granulometrical and palynological methods. After the micromineralogical investigations of the materials of a few comparatively deeper boreholes, the source directions of the Pleistocene and even Pliocene sediments were also explored and sketched.

What cannot be denied nevertheless is that the Department's scientific scope was markedly restricted as compared to FERENCZI's first programme. Let us recall in this connection that, beside investigating surficial geology, FERENCZI intended — very correctly — to investigate the entire Tertiary basin fill and, indeed, the pre-Tertiary basement as well. His intentions, however, were forgotten after his leave to abroad. With the decline of the vast campaigns for mapping, canalization and water power developments the first symptoms of the disadvantage of the biased specialization in unconsolidated sediments were felt as early as the middle of the 1950's. In the subsequents years, to 1965, the poorly equipped, small-staff Department had nothing else to rely on than the modest special-purpose credits provided by the government and the Academy of Sciences. These subventions, however, were enough merely to cover the expenses for summarizing earlier results and undertake investigations in part-themas. That was the moment when the Department joined the programme of complex investigations of the Great Plain's natron lakes. In addition, attempts were made at sedimentological evaluations of some core-drilled boreholes which have cut across the basinal Pleistocene and Upper Panno-

nian. These attempts, however, were jeopardized by the enforcing of the development of well-logging profiles, as the number of core-drillings and the amount of the material suitable for analyses had dropped to minimum.

This situation was changed radically by the great success of oil and gas prospecting in the vicinity of Szeged. A city of merely agricultural interest, Szeged became overnight one of the country's most important industrial power centres. These changes in the economic background should be naturally reflected by corresponding changes in the Department's scientific programme.

Hydrocarbon prospectors take interest first of all for the pre-Quaternary basinfilling and its pre-Tertiary basement. This means that the Department's earlier tapered sedimentological activities have to be significantly widened by varied and modern investigations of facies of more diagenized detrital, carbonate and mixed-origin sediments. Thanks to the generous support on the part of the National Oil and Gas Trust the relevant methodological materials have been assembled for the most part. Thus the Department is already able to make efficient contributions in sedimentological respect to those investigations which the Trust is going to undertake in order to assess the prognostic oil and gas reserves of the country.

There is no question of breaking with investigations of the Quaternary formations either, for these will be carried on at a rate depending on the size of the expected sponsorship on the part of the Szeged Commission of the Academy. And yet, most efforts are to be concentrated on those complex sedimentological projects which are to be developed according to the contracts concluded between the National Oil and Gas Trust and the Department.

Based on local traditions and brought into correspondance with the needs of economy and the present-day level of science, this widening of the Department's scientific scope is useful and necessary for both the Department's staff and for raising education standards. It is hoped to endow our Department with such individual features which permit its rejoining in the under- and post-graduate training of geologists, over that of teachers, too, — opening up a new page in its history.

LITERATURE

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