

ON THE 50th BIRTHDAY OF RNDr. ANTON BIELY, CSc.



On December 18th, 1980 our geological public celebrated the 50th birthday of RNDr. Anton Biely, CSc. He was born on December 18th, 1930 in Solčany (district Topoľčany) where he received his early education. In the years 1942—1950 he attended the high school in Topoľčany and accomplished it with maturity exam. In 1950 he entered Comenius University in Bratislava to study geology. After two years he passed to Charles University in Prague where he graduated in 1954. In 1962 he submitted the master's thesis and was awarded the degree of CSc. In 1967 he got his RNDr. degree.

After his university education, RNDr. A. Biely, CSc. was employed by Dionýz Štúr Institute of Geology in Bratislava and he still works there. Owing to his unusual special aptitude and personal characters he mastered geological problems of the West Carpathians very quickly. For this reason he was appointed responsible for the solution of significant tasks and he always worked on important posts. In 1958—1964 he was the head of the Mesozoic Department, and in 1965—1967 he was Editor-in chief of geological maps. In 1964 he was appointed chairman of editorial board of geological publications issued by D. Štúr Institute of geology, and scientific editor of the Bulletin of Geological science, ser. Western Carpathians. He occupied these posts until his departure to Tunisia in 1967. After his return from Tunisia in 1973 he was again appointed the head of the Department of deep structure and in 1978 — the head of the Mesozoic Department. For his broad experience and scientific erudition he was nominated scientific secretary of Dionýz Štúr Institute of Geology, the deputy head of the Regional Department, member of the Commission for examination of post-graduate students of the Institute, member of the Scientific Board of the Institute, and the Common Scientific Board of the Central Geological Institute and of Dionýz Štúr Institute of Geology, member of Editorial Board of geological publications of the Institute, scientific editor of the edition Western Carpathians, ser. Geology, and member of Editorial Board of Věstník (issued by Central Geological Institute). Since as early as 1958 he has been member of Slovak geological society whose secretary he was in 1958 and deputy chairman in 1959. In 1956—1966 he was chairman of the Slovak Geological Society of Bratislava and in 1974 he was again included in the Central Committee of the Slovak Geological Society. For his meritorious work he was praised with a distinction of the „Best worker of geological survey“ in 1964

and the plaque of Cyril Purkyně of the Central Geological Institute, and the plaque of Dionýz Štúr Institute of Geology.

RNDr. Anton Biely, CSc. began his geological researches in D. Štúr Institute of Geology in 1954. His scientific activities may be divided into several parts according to the themes of his work. In the first years he made researches of crystalline complexes and of the Late Paleozoic in the Slovenské rudohorie (ore mountains). He compiled a detailed geological map 1:25 000 and found out that there is a tectonic contact along a north-dipped plain between the zone of garnet mica schists and the Tisovec migmatite-granite zone. He also found there synclinal zones of Permian-Triassic rocks. In the area of Dobšiná he divided the Late Paleozoic into several lithological levels, and explained its tectonic position.

The second stage of A. Biely's activity comprised extensive stratigraphical research of the Mesozoic of the Inner West Carpathians, compilation of geological maps 1:25 000 of the Tribeč Mts., the Muránska plošina (plateau) the Galmus Mts.; northern slopes of the Nízke Tatry Mts., the eastern part of the Hron r. valley and of several smaller regions. His researches resulted in many new stratigraphical data. He made lithostratigraphical division of the melaphyre „series“, formerly referred to as Lower Triassic, into Carboniferous, Permian and Lower Triassic parts. In contrast to other Permian facies he revealed the Lower Permian in the „series“. This is very important for the conception of paleogeography and paleotectonics of the Late Paleozoic and Lower Triassic in the whole Inner Carpathians. Basing upon fossil finds, he precised stratigraphy of the Middle Triassic of the Choč nappe (the age of Gutenstein limestones, Choč dolomites, Reifling limestones).

Basing on mapping and on lithostratigraphical research in the Nízke Tatry Mts. he distinguished two principal Triassic facies of the Choč nappe. They also occurred in other areas. He also found new occurrences of the Jurassic in the Choč nappe which facilitated explanation of lithostratigraphy and tectonics of the nappe.

In the Križna nappe he precised stratigraphy of the Triassic Ilanova „series“ and discovered lithostratigraphic units unknown in other regions. His finds of dasycladaceans in the Triassic of the Križna nappe and in the mantle „series“ of the Tribeč Mts. changed the idea of paleogeographic distribution of the fossils and inspired the opinion about the direct communication between the Carpathian sea basin and the Silesian region, i.e. that the Vindelice continent did not exist in the Middle Triassic in the meridian of the West Carpathians. In the Triassic of the Muráň plateau the individual lithostratigraphic units were documented by fossils and so he found out that the Dachstein limestones extended also in the Rhaetian. According to sporomorphs he also proved the Triassic age of limestones with schist layers in a metamorphosed carbonate „series“ in the basement of the Lower Triassic of the Muránska plošina (plateau). So he proved for the first time the Mesozoic age of the mantle „series“ of the Veporides — one of the most discussible sequences.

Another important sphere of A. Biely's activity is the tectonic research of the West Carpathians. His mapping and stratigraphical results contributed markedly to explanation of the structure of the West Carpathians. On the

ground of detailed geological mapping he revealed the intricate structure of the Choč nappe on northern slopes of the Choč nappe on northern slopes of the Nízke Tatry Mts. The Choč nappe consists there of three partial nappes of which the upper one has an extremely intricate structure. It is represented by the Biely Váh facies. After the first doubts about the existence of recumbent, north-submerged folds, basing on detailed mapping, he confirmed the earlier, R. Kettner's opinion about the existence of such type of deformations. Distinction of two facies of the Choč nappe inspired distinction of the Šturec facies nappe. In the area of Levice he found out that the Mesozoic islets there belong to the Triassic higher nappes. In the Tribeč mountains he proved the Middle Triassic age of light-coloured limestones in the overlier of *hauptdolomite*. So there also is a relict of a higher nappe. It follows that higher nappes than the Choč nappe were widely present also in Western Slovakia. When he found out that the basal part of the Choč nappe — the melaphyre „series“ is not Lower Triassic but Permocarboiferous in age, it affected markedly the idea about the nappe being rooted in some of crystalline belts of the Veporides. So it is doubtless that no one of crystalline belts may be the original basement of the nappe because the mantle „series“ of the Veporides are incomparable with the melaphyre „series“. A. Biely correlated the tectonic shreds of the Carboniferous in the basement of the Muránska plošina (plateau) and of the Stratenská hornatina Mts. with the Carboniferous of the melaphyre „series“ on the ground of lithology. So the Choč nappe rests tectonically on the Veporide basement and its origin is derived from a scar indicated by the Lubeník — Margecany line. Basing on the results of facies and stratigraphical researches he assumes that the lack of Mesozoic „series“ in this belt cannot be ascribed to tectonic reduction but to primarily small thicknesses and mainly to erosion. Only the mantle of the northern part of this zone — the Veľký Bok „series“ and its equivalents in Pohronie have better preserved mantle. This is why he derives the origin of the Križna nappe from a scar indicated by the Čertovica line. Some geologists reject the opinion but they have no reliable arguments. The opinion of A. Biely about the origin of nappes of the Inner Carpathians is particularly significant for palinspastic reconstruction of the Carpathian geosynclinal area.

A. Biely's expert activity in Tunisia (1967—1973) represents a particular period of his research work. He concentrated on investigations in the eastern part of Atlas. He precised stratigraphy of the Jurassic in the Tunisian ridge, revealed the existence of extreme concentrations, mainly in the Lias an in the Aptian which is very important for the explanation of paleotectonic conditions in the so-called l'axe Nord-Sud. On the ground of analysis and new fossil finds he proved that the so-called *salifère* regarded as Jurassic-Cretaceous or Paleocene by some geologists, is Triassic in age. Basing on spatial and lithofacial analyses of the Mesozoic and the Tertiary he proved that the northernmost part of Tunisia has nappe structure while the part of *salifère* (formerly referred to as *diapirs*) is a part of the Talian nappes. He also obtained important data on Tertiary, mainly Oligocene-Miocene formations. In Northern Tunisia, in Miocene sediments, A. Biely distinguished two sedimentation cycles separated by discordance the pre-nappe and the

post-nappe cycles. He also distinguished two cycles — more or less synchronous with the preceeding — but of different lithofacies development and separated by hidden discordance.

The results of A. Biely's investigations were published in 60 works.

It is interesting and indicative of purposeful methodical approach and invention of A. Biely, that he always deeply analyses his results and arguments of his scientific predecessors to get a critical attitude to the core of the problem solved and to be able of proper syntheses. A particular feature of his scientific activity is in accurate, clear expression and terminology.

RNDr. Anton Biely, CSc. a highly educated scientist with broad and deep experience not only from the West Carpathians but also from the entire Alpine system in Europe and from North Africa is in his fifties still fully enthusiastic in his scientific researches.

The whole Slovak geological public wishes him plentiful creative abilities, success in work and in his personal life, steady health and life optimism.

Translated by A. Jassingerová

O. Fusán, O. Samuel