

## *In Memory of Scientists*

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### **KOSTENKO Nikolay Nikolaevich**

*(The 110th anniversary)*



Kostenko Nikolay Nikolaevich - the honored geologist-explorer of Kazakhstan, the doctor of geological-mineralogical sciences. Kostenko N.N. began to study the quaternary deposits of Kazakhstan by the insistence of Academician Satpayev K.I. His methodical article was published in "Soviet Geology" journal according to the first results of his research in 1940. It reflected the methodology of mapping of the young Quaternary deposits of our Republic, which was of great interest to young geologists, as the need for building materials grew every year. In addition, the methodological recommendations for mapping quaternary deposits subsequently successfully spread to the study of similar deposits adjacent to Kazakhstan territories.

Geological career of N.N. Kostenko practically began from 1926 to 1929 when he worked in Geolkom, where he was under the guidance of Sergei Nikolaevich Mikhailovsky, the son of the famous Russian writer Nikolai Georgievich Garin-Mikhailovsky, geological exploration work was conducted in the Crimea. At this time, he was fascinated by geology. Impressed by the stories of S.N. Mikhailovsky about Kazakhstan, Nikolai Nikolayevich moved to Alma-Ata. Here he graduated from the evening courses of the training faculty for higher education. From 1930 to 1932, he worked in various geological enterprises in Semipalatinsk and Taldy-Kurgan cities. At the end of 1932, while continuing his production work, Nikolai Nikolayevich entered the Kazakh Geological Prospecting Institute of Semipalatinsk, which was transferred to Alma-Ata and transformed into the Kazakh Mining and Metallurgical Institute (later - Kazakh Polytechnic Institute, now - Kazakh National Research Technical University named after K.I. Satpayev). After graduation N.N. Kostenko worked as the head of the Almaty and Petropavlovsk hydrogeological parties. In 1938 Nikolai Nikolayevich studied the technique of producing spore-pollen analyzes in Leningrad at the All-Union Geological Institute (VSEGEI) and in Moscow at the Geological Institute of the Academy of Sciences of the USSR (USSR Academy of Sciences). This internship later gave him the opportunity to create a palynological laboratory under the Kazgeologic Administration, where he worked under the guidance of professionals - experts in palynology and malacology and where they creatively discussed the results obtained to determine and specify the age of the geological layers.

From 1939 to 1981 N.N. Kostenko worked continuously in the Kazakh Geological Administration (Yuzhkazgeologiya) at high positions, editing sheets of geological maps for southeastern Kazakhstan. In 1958 was created the Cenozoic (since 1962 Meso-Cenozoic) party on his initiative. He united under his own head a large team of specialists of various profiles (stratigraphers, paleontologists, palynologists, malacologists, and lithologists), who were engaged in a comprehensive study of the Mesozoic and Cenozoic deposits, which previously received insufficient attention. Nikolay Nikolaevich annually visited summer fieldwork in various regions of Kazakhstan with the party's staff, which consisted of several detachments, showing the youth's example of determination to learn new regions, tirelessness and unpretentiousness to life in the field. He was distinguished by his exceptional diligence, the richest experience of the researcher, sensitivity and attentiveness to people, subtle humor, charm and modesty. He figuratively described how the changes in the paleo geographic situation in the studied territory occur. The youth admired his erudition and ability to tell interestingly and intelligibly what they saw on geological outcrops and in routes. A lot was done in science for the first time: the principles and methods of stratigraphic dismemberment of young Cenozoic strata have been developed in this way; with his participation and under his leadership, the unified and correlational stratigraphic schemes of the Mesozoic and Cenozoic were compiled. He always stood at the source of new methodological approaches in stratigraphy. In the 1960s N. Kostenko and V.S. Bazhanov, V.S. Kornilova began intensively introduce the results of research on the remains of fossil vertebrates and plants collected from various regions of Kazakhstan in support of the first stratigraphic schemes of the Cenozoic deposits of Kazakhstan, which were approved by the KazMCMC in 1967 and 1971. In 1984, the Plenum of KazRMC issued a Decree that the most important task for all geological organizations of Kazakhstan in the next decade is the development and improvement of the stratigraphic and paleontological basis for the compilation and publication of the Geological Map of Kazakhstan at a scale of 1:50 000. Based on this Resolution with direct participation N.N. Kostenko conducted intensive preparation of mock-ups of stratigraphic schemes of Mesozoic - the Cenozoic deposits of Kazakhstan of the next generation. The obtained data formed the factual basis for the stratigraphic schemes of the Mesozoic and Cenozoic of Kazakhstan, adopted in 1986 at the III Kazakhstan Stratigraphic Conference and approved by the Moscow Committee of the USSR in 1988. (Neogene schemes) and in 1989 (Paleogene schemes) and published with the active participation of the author only in 1996.

The result of scientific and practical activities of N.N. Kostenko was his numerous scientific articles and monographs. Among them he co-authored books: "Geological structure of Central and Southern Kazakhstan" (1961), "Atlas of the leading forms of mammals of the anthropogen of Kazakhstan" (1962), "Fundamentals of stratigraphy of the anthropogen of Kazakhstan" (1963), "Geomorphological outline of the western regions of Central Asia" (1964.), "Quaternary deposits of Kazakhstan and the adjacent territories of the Union republics" (Explanatory note to the map of scale 1: 1 500 000) "(1978)," Extinct animals of Kazakhstan (late Cenozoic paleogeography) " (1984). He edited 35 geological maps of scale 1: 200 000 with notes to them; together with V.F. Bespalov he edited the Geological map of the Kazakh SSR at a scale of 1: 500,000 with notes on 5 regions of Kazakhstan. N.N. Kostenko is the editor-in-chief of the Map of Quaternary Deposits of Kazakhstan and Adjacent Territories of Union Republics - Pub.1978.

Nikolai Nikolayevich was a participant in many international geological congresses, symposiums, meetings, conferences.

After he was retired in 1981 N.N. Kostenko continued work for 13 years more. In addition to scientific works, he participated in field research with the staff of the institutes of geology and zoology of the Academy of Sciences of the Kazakh SSR. Several doctoral and candidate dissertations were defended under his leadership.

N.N. Kostenko was awarded with medals: "For Valiant Labor in the Great Patriotic War of 1941-1945", "For Labor Valor", "Thirty Years of Victory in the Great Patriotic War of 1941-1945", "Forty Years of Victory" in the Great Patriotic War of 1941-1945 ", "Veteran of Labor ", a sign "For Services to the Republic "and a number of letters of the Supreme Council of the Kazakh SSR.

N.N. Kostenko's scientific heritage continues to serve people who develop his ideas and work in scientific and practical aspects.

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