

## A Tribute to the Eightieth Birthday of Prof. Adiya Tsendsuren

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This year professor Adiyagiin Tsendsuren, who was one of the senior biologists and leading scientists of Mongolia, must have been to reach the 80<sup>th</sup> year of his life. He was a scientist, who led to the development of modern biological sciences, especially entomology in Mongolia, through his academic activities, which has spanned more than three decades. He has spent much of his career studying insect fauna of Mongolia, but he was also one of the most talented teachers to educate generations of biologists-entomologists in the country.

A. Tsendsuren was born in 1930 in Bulgan district of Arkhangai province in central Mongolia in the family of a nomadic herder. Soon after that, his family moved to Ulaanbaatar, capital city of the country, where he spent his whole life. Having completed the school course in 1946, A. Tsendsuren entered the Pedagogical College, and after two years of

study he graduated from the college as a school teacher of nature and environment. Thus, his teaching career was started so early, even when he was young boy with age of 18 years. A. Tsendsuren worked as a teacher at the schools in Zamt district of Central province, as well as in the capital city, and then in 1951, he became a student at the Mongolian State University (currently National University of Mongolia).

In 1955 A. Tsendsuren graduated from the university majoring in biology and chemistry, and continued working at the Department of Biology (currently Department of Zoology) of the same university, where he solely worked until end of his life. Thus, his enthusiasm for scientific research on unique insect fauna of Mongolia, and an excellent academic performance are made him to get a permanent position at the university.

Under the supervision of Prof. B. V. Dobrovolsky, he started to study the plant pest species belonging to darkling and click beetle families in central Mongolia, and since 1959 he studied at the Department of Entomology, Moscow State University as a post-graduate student. In 1963 A. Tsendsuren defended his doctoral (PhD) thesis, entitled "*Plant pest species of darkling and click beetles in central Mongolia*". He revealed 38 species of beetles that feed on and harm the agricultural cultivations, of which 7 are being serious pest of crop and vegetables. In addition, he elaborated a practical recommendation for controlling of those pests. Thus A. Tsendsuren became a first entomologist of Mongolia, and further he made major contribution to the development of entomological science in Mongolia as a founder. The foreign entomologists, who worked in Mongolia, A. S. Rozhkov, I. M. Kerzhner, Z. Kaszab, G. S. Medvedev etc were evaluated and highly appreciated his contributions.

After completion of his post-graduate study, A. Tsendsuren continued to work at the former university to teach different subjects, including Entomology, Invertebrate zoology etc., and performed his research on various groups of

insects. He closely collaborated with number of foreign entomologists, and one of them is Dr. Zoltan Kaszab from the Hungarian National Museum of Natural History. The latter scientist worked in Mongolia for six years through 1963-1968, and organized several series of zoological expeditions, which covered almost whole country. Taking in the same expeditions and working on the similar groups of insects, A. Tsendsuren cooperated with Dr. Kaszab for many years, and based on the materials of above-mentioned expeditions, more than 400 scientific articles were published on various groups of insects of Mongolia.

Between 1971 and 1973 A. Tsendsuren pursued his studies at the Institute of Zoology, Academy of Sciences of the former USSR to obtain his higher scientific degree, D.Sc. completing a dissertation work on the theme “Darkling beetles (Coleoptera, Tenebrionidae) of Mongolia”. He revealed the diversity of darkling beetles in Mongolia, which consisted of 161 species belonging to 39 genera, of which 4 genera and 89 species are endemic to Mongolia. Also, he elucidated the systematic relations, biogeography, distributional patterns, faunal origins as well as practical importance of darkling beetles found in Mongolia. By the decision of the Supreme Attestation Commission of the Ministry of Education, Mongolia, in 1968 A. Tsendsuren received the title of associate professor, and 1982 became a professor.

Since 1970 A. Tsendsuren actively took in part the two joint Soviet-Mongolian biological expeditions, one of them was organized by the academy of sciences of two countries, and another – by the Mongolian State University and Irkutsk State University. He served for many years as a member of the editorial board of the series of publications, *The Insects of Mongolia*, and *Natural Conditions and Biological Resources of the Huvsgul Lake Region*, which based on results of above-mentioned expeditions.

Prof. A. Tsendsuren was a leading expert on darkling and click beetles as well as related coleopteran families of Mongolia. In mid of 1970s the joint Arachno-entomological Expedition by the Mongolian State University and Komensky University of Bratislava, former Czechoslovakia was started, and Dr. A. Tsendsuren worked as a leader of Mongolian partner. In the frame of research plan of

this expedition, A. Tsendsuren maintained investigations (together with his colleagues and students) of blood sucking and parasitic insects, such as fleas, black-flies etc., and revealed their diversity, composition, geographical and habitat distributions, as well as its medical importance.

With the course of time, the subject of his study became wider. He published several articles on introduction of freshwater whitefish, Arctic cisco (*Coregonus autumnalis*) in the Lake Hövsgöl; on fish composition and resources of Lake Ugii, and on diversity of arachnids in some regions of Mongolia. Being an energetic person he managed to unite all entomological studies in Mongolia, consulting and collaborating with other specialists in the country, and published the comprehensive books on insect fauna of Mongolia (Tsendsuren & Ulykpan, 1978; Tsendsuren, 1987).

He published several monographs and textbooks on entomology, zoology and various aspects of biology, more than 200 articles (e.g. Tsendsuren, 1963a, b, 1964, 1968a, b, c, 1975a, b, 1987; Dashdorj *et al.*, 1970; Tsendsuren & Ulykpan, 1978, 1989a, b; Edlichka *et al.*, 1982), attended scientific conferences and gave seminars. Prof. A. Tsendsuren was a very knowledgeable person and good teacher, several dissertation studies and many graduate theses having been maintained under his supervision.

He was highly valued by his foreign colleagues as the founder of entomological school in Mongolia. He elected as an Honorary Member of the Entomological Society of former Czechoslovakia, and received a special award of honorarium from the Komensky University of Bratislava. Besides of his teaching and research works, Prof. A. Tsendsuren served at the university as the dean of the Faculty of Natural Sciences, head of the Department of Zoology, and worked for several other academic as well as organizational duties.

All his students, friends, colleagues regarded Prof. A. Tsendsuren as a distinguished entomologist, a gifted research scientists and a complaisant personality. His colleagues and students often dedicate their newly discovered species in his honor, as several species of insects and arachnids, such as *Anatolica cendsurenii* Scopin, 1967, *Epitrichia tsendsurenii* Kaszab, 1968, *Dactylochelifer cendsurenii* Krumpál *et al.* 1982, *Hypovertex cendsurenii*

Shtanchaeva et Netuzhilin, 1993, *Procorynethes tsendsurenii* Bayartogokh, 1998 etc. were named after him. As one of his pupils, I feel myself honored to make a brief summary of his pioneering works on entomological research in Mongolia, as well as teaching and other activities by him. His enormous scientific career and influential works have always inspired the generations of biologists as well as entomologists in Mongolia.

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