

Professor V. V. Kucheruk is sixty

The ecological concept of natural focality of zoonoses formulated and elaborated by E. N. Pavlovsky is a fundamental contribution of parasitology and medical zoology to further advances of epidemiology and epizootiology. The parasitologists and medical zoologists of many scientific trends may effectively participate in the complex research of natural foci of diseases afflicting man and animals and in the prevention of these diseases. One of the most talented and prominent representatives of this ecological approach to the above research in the world, Valent Viktorinovich Kucheruk, Professor in medical zoology and parasitology, head of the Department of Natural Focus Diseases at the Gamalaya Institute of Epidemiology and Microbiology in Moscow, celebrated his sixteenth birthday on March 18, 1976.

I shall try to recapitulate briefly the extensive original scientific and organizational activities performed by Prof. Kucheruk in the USSR and in the World Health Organization. Both his work and his personality are held in high respect and have contributed to further development of the research of natural foci of various diseases not only in the USSR, but in other parts of the world as well.

He started his scientific career by studies on the ecology of rodents, as the pupil of A. N. Formozov, the outstanding world theriologist and zoogeographer. His great talent and high erudition attracted attention in his first comprehensive work "Materialy po ekologii nazemnykh pozvonochnykh tundr yuzhnogo Yamala" (A contribution to the ecology of terrestrial vertebrates in tundras of the southern Yamal) (in co-authorship with T. N. Dunaeva). This work, which was translated into English and Finnish, belongs to the best treatises ever written on the ecology of tundra vertebrates. In later years he published a number of valuable papers dealing with the ecology and fauna of mammals in the eastern part of Mongolia, an adjoining territory of the USSR and China. As an example may be mentioned his study on the ecology and epizootological importance of *Microtus brandti*, which served as his candidate dissertation paper and as a basis for his other comprehensive work concerned with the carriers of plague.

While mentioning these papers his next important activity, namely the research in ecology and medical theriology of plague must not be omitted. The theoretical elements of this work have been summarized in the publication "Mlekopitayushchiye stepei Palearktiki, prirodnye ochagi chumy v stepi i nekotorye teoreticheskie voprosy prirodnoi ochagovosti etoi infektsii" (1961) (Mammals of the palearctic



steppes, natural foci of plague in the steppe and some theoretical problems of natural focality of this infection — the doctoral dissertation paper of V. V. Kucheruk) and "Paleogenesis of natural foci of plague" (1960, 1965). In the former paper he justified the independence of the steppe faunistic complex introducing many zoological, ecological, botanical and epizootological facts, elucidated the role of grass-eating animals in ecosystems of this biome and paved the way for further elucidation of natural focality of plague in steppes. In the latter paper he shed light upon the origin and spread of natural foci of plague depending on carriers (reservoirs) of plague in different geographical environment. The above mentioned papers, together with other treatises, served as a basis for his elaboration of theoretical problems of natural focality of plague, particularly of the concepts about the types and age of natural foci of plague, independence (autonomy) of natural foci, mapping etc.

Another activity of V. V. Kucheruk has been devoted to the natural focality of tularemia, studied together with Prof. N. G. Olsufyev and his co-workers. The structure of the natural focus of tularemia and the relevant landscape configuration were investigated in detail, particularly on the example of several types of tularemia natural foci of aquatic character. V. V. Kucheruk studied also the ticks as maintenance hosts of tularemia in the interepizootic

period, dynamics of epizootic process, prognoses on the occurrence of tularemia reservoirs etc. He participated in the preparation of a methodical hand-book on epidemiology, bacteriology and control of tularemia.

With great energy he devoted himself to the research of natural foci of tick-borne encephalitis (TBE). He worked out very modern methods for mapping of the structure of TBE natural foci, research of the occurrence of vectors and limiting the valency of TBE natural foci. On the basis of his methods, for instance, the morbidity of TBE in the Udmurt ASSR was lowered more than ten times. The results of these investigations were summarized in the book "Kleshchevoy entsefalit v Udmurtii i prilegayushchikh oblastyakh" ("Tick-borne encephalitis in Udmurtia and adjacent regions").

The most characteristic feature of Prof. Kucheruk's scientific activities is the association of a deep theoretical knowledge of the problem with that acquired during the field experiments and organizational activities aimed at the realization of practical results of his studies. Of great significance is his participation in the present studies of the theory of natural focality, in which Prof. Kucheruk applies besides his own wide knowledge also that of his disciples and co-workers. He elucidates the biotic and spatial structure of natural foci, their types and survival of the pathogen in nature in the period between the epizooties.

The scientific and organizational activities of Prof. Kucheruk in the research of natural focality are very extensive. In the World Health Organization he contributed significantly to the propagation of ecological bases of this branch of parasitology and medical zoology. He was three times the director of WHO interregional seminars on plague investigations in the USSR and Iran, as the vice-president he participated in the session of the Committee of experts in plague investigations in Geneva and was also the director of WHO interregional seminar on natural foci in Moscow and Samarkand in 1974. He is an expert of WHO for insecticides and vector control, a consultant of WHO in ecological problems and director of the reference centre for the ecology and distribution of ticks. He has been working for a long time in the All-Union problem commission "Infections with natural focality". He is a member of many methodical commissions of the Ministry of Health of the USSR.

Since the time of his studies at the university he headed or participated in numerous scientific expeditions on the territory of the USSR, China, Korean People's Democratic Republic and Iran.

He has published more than 150 papers in the Soviet and foreign journals, participated in the edition of the series "Fauna i ekologiya gryzunov" ("Fauna and ecology of rodents") and edited several books and monographs.

Prof. V. V. Kucheruk, doctor of biological sciences, is a native from Moscow. Already during his studies he took a great interest in the life of animals, which led him to a circle of young biologists of the Moscow Zoo when he was only fifteen years old. Many of the present outstanding Soviet zoologists were also members of this circle at that time. In 1934 V. V. Kucheruk started his studies at the Biological Faculty of the Moscow State University. Here he carried out his scientific studies in the laboratory of ecology and laboratory of vertebrates, under the guidance of N. I. Kalabukhov and A. N. Formozov. He finished his university studies in 1940 and then worked in the anti-plague station in Chita. During the war he worked as a zoologist in a military anti-plague laboratory in the Far East. In the years 1945-1946 he participated in the difficult liquidation of plague in north-eastern China. He was decorated with an Order of the Patriotic War for his sanitary service in the Soviet Army.

In 1946, V. V. Kucheruk started to work at the Department of Natural Foci Diseases in the Laboratory of Medical Zoology, the Gamaleya Institute of Epidemiology and Microbiology in Moscow. In 1960 he became the head of this Laboratory and in 1970 of the whole Department.

Over many years, Prof. V. V. Kucheruk has close and friendly contacts with Czechoslovak Scientists engaged in the study of natural foci. He visited Czechoslovakia several times and participated in the organization of the Symposium on Theoretical Questions of Natural Foci of Diseases held in Prague in 1963. He was also Scientific Adviser of the Proceedings of this Symposium.

Czechoslovak parasitologists wish Prof. V. V. Kucheruk, who is a great personality of the Soviet science and an outstanding man and friend, further success in scientific work for the development of science and sanitary measures, good health and personal well-being.

Prof. Dr. B. Rosický, Dr.Sc.