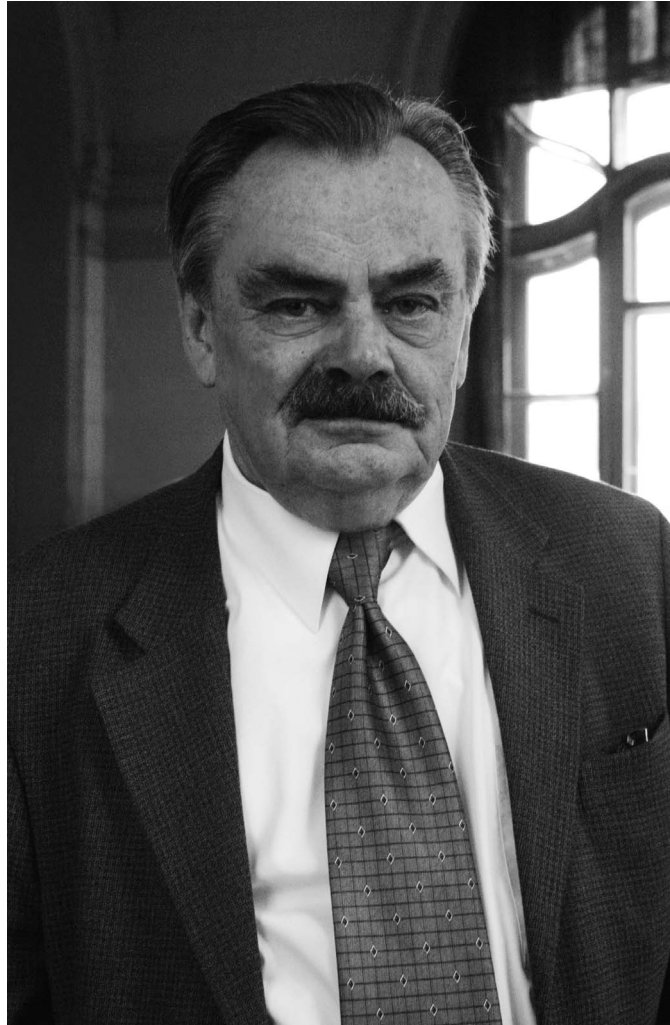


IN MEMORIAM



VYTAUTAS KONTRIMAVIČIUS (1930–2016)

Global parasitology and the academic community of Lithuania lost an outstanding man and ambassador for science with the passing of academician Vytautas Kontrimavičius in Vilnius on 20 September 2016. A world-class parasitologist, and an organizer and supporter of biodiversity research across Eurasia and the world, contributions by V. Kontrimavičius were many and varied in a lifetime dedicated to science.

Vytautas Kontrimavičius was born on 22 January 1930 in Kaunas, Lithuania, the country in which he spent his childhood and the last years of his academic training. Subsequently, over the next 30 yr, he studied and worked in Russian academic institutions which were involved in basic and applied veterinary medicine, biology, and parasitology research. In 1952, he

graduated from the Leningrad Veterinary Institute with an honors diploma as a Veterinary Surgeon. Soon, as a young man, he was deeply impressed by powerful and insightful lectures in helminthology given by academician K. I. Skrjabin, the founder of the influential Russian School of Parasitology. Immersion in this new environment was central to his decision to pursue a career path as a scientist through his entire life. He relocated to Moscow, becoming a postgraduate student in the Helminthology Laboratory, Russian Academy of Sciences, headed by K. I. Skrjabin and under the supervision of Professor A. A. Mozgovoy, another prominent Russian parasitologist. As an energetic student under mentorship from K. I. Skrjabin, in 1955 Vytautas defended a dissertation on *Helminth Fauna of Hares in the USSR, and Testing of its Ecology-Geographical Analysis*, for which he was conferred a scientific degree of the



FIGURE 1. The Chaun Biological Station, located on the coast of Chaun Bay, Chukotka, Russia (photo of 1978: archives of V. Kontrimavičius).

Candidate of Biological Sciences (equivalent to the western Ph.D.). During 1956–1968, he continued helminthology research in Moscow, building a strong conceptual foundation in evolution and biogeography, resulting in defense of his dissertation entitled *Helminth Fauna of Martens and Ways of its Formation*, for which he was awarded a scientific degree of the Doctor of Biological Sciences in 1968. Based on this dissertation and also through additional sampling and research in Siberia and the Russian Far East, he published a monograph entitled *Helminth Fauna of Mustelids and Ways of its Formation* (Kontrimavičius, 1969). Beyond an invaluable source of information on this subject, the monograph developed and explored concepts about the critical role of host colonization and *hostal radiation* in the evolution and assembly of complex helminth faunas over evolutionary and ecological time.

The late 1960s were an exciting time of expansion and development in Russian science and, during 1968, the Siberian Department of the Academy of Sciences of the USSR established the Department of Biological Problems of the North, later incorporated into the Northeastern Complex Institution located in Magadan on the shores of the Sea of Okhotsk. A unique opportunity for research in poorly known Arctic ecosystems was established, and Vytautas served as the first director of this Department from 1968 to 1972. Building directly on the success and impact of the Department under guidance from V. Kontrimavičius, in 1972 the Institute of Biological Problems of the North (IBPN), Far Eastern Branch of Academy of Sciences of the USSR was founded. In 1970, he was elected a Corresponding Member of the Academy of Sciences of the USSR and took a position as Director of this institute in 1972, which he headed until 1982.

Colleagues remember him as an enthusiastic field parasitology researcher, wonderful organizer, and administrator. Due to his enthusiasm and hard work, several critical Biological Research Stations, which were well-equipped by standards of that time, were established and became field-work centers for wildlife biology research. The Chaun Biological Station, located in a



FIGURE 2. First International Workshop for Arctic Parasitology (IWAP I), Prince Albert National Park, Saskatchewan, Canada, September 2000. Left to right: Academician Vytautas Kontrimavičius, Dr. Eric Hoberg, Dr. Susan Kutz, and Dr. Robert Rausch during discussions of Beringia and northern parasitology (photo: E. Hoberg).

remote northern region of Russia on the coast of Chaun Bay, Chukotka, became a world-recognized site for investigations of deceptively complex Arctic ecosystems (Fig. 1). Field-based investigations linking ecology, evolution, biogeography, and physiology encompassing research on major groups of mammals, birds, fish, free-living invertebrates, helminths, and other parasites defined significant contributions that emerged from Chaun. Chaun Station further was a seminal gateway for international collaborations that brought Russian, European, and North American scientists together for the first time in remote, high-latitude regions to discuss current and emerging problems and to establish life-long friendships. Not only Russian researchers but also scientists from the United States, Canada, Finland, Lithuania, Japan, and other countries were pleased with the singular opportunity to sample biological material for their research from remote and difficult arctic ecosystems which had historically been without access for many years. Materials for many prominent parasitology studies by Robert L. Rausch, Virginia R. Rausch, Eric P. Hoberg, K. Neiland, Janina Baršienė, and many others were collected at the Chaun Biological Station due to the encouragement of Vytautas. General ecological studies also unfolded in the landscapes surrounding Chaun, promoting important collaborations with professors F. S. Chapin, Steve F. MacLean, and Robert G. White, the Institute of Arctic Biology, University of Alaska, Fairbanks. Access to Chaun, facilitated by Vytautas and the IBPN, was important in promoting a developing dialogue for science in the Holarctic region and a powerful interface for Russian and North American science (Fig. 2).

Beyond Chaun and the series of stations supported by IBPN, Vytautas was instrumental in establishing 2 large nature reserves in northeastern Russia which are now of global scope and importance. Wrangel Island and the Magadan Nature Reserve (also known as “Magadansky”) hold critical northern habitats during a time of accelerating ecological research across the Holarctic. It is worth mentioning that Vytautas also enthusiastically supported the program leading to the introduction and re-acclimatization of muskox (*Ovibos moschatus*), which had been extirpated from the Arctic region of Asia in the Holocene. Twenty

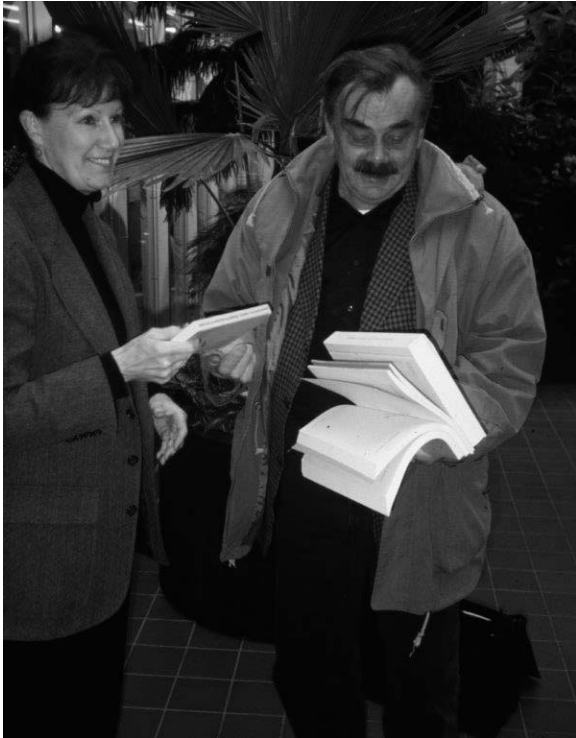


FIGURE 3. Academician Vytautas Kontrimavičius donates English translations of his monographs on Mustelid Parasites, *Metastrongyloidea* Lungworms, and others to the Chief Librarian of the Western College of Veterinary Medicine, University of Saskatchewan, following IWAP I during September 2000.

animals were successfully transported from Nunivak Island, Alaska to Wrangel Island, and then 20 animals were placed on the Taymir Peninsula. Both muskox populations were established, and they currently are in good condition.

Vytautas Kontrimavičius was particularly interested in ecological and general parasitology problems, but also devoted considerable efforts to the diversity, classification, and zoogeography of helminths. His studies provided information about general patterns in the distribution of parasite faunas and their assembly and development in certain groups of arctic vertebrates. He was also interested in understanding the role of Beringia in formation of the Holarctic fauna, with his original ideas remaining at the core of ongoing investigations in the region extending from the Kolyma River to the Yukon Territory. In 1973, the Far-Eastern Scientific Centre of the Academy of Sciences of the USSR arranged a symposium entitled *The Bering Land Bridge and its Role for the History of Holarctic Floras and Faunas in the late Cenozoic*, which was held in Khabarovsk in the Russian Far East. Vytautas Kontrimavičius took an active part in the organization of this meeting and as editor of an extensive proceedings volume that latter was published in English (Kontrimavichus, 1985a). The symposium was the first prominent scientific meeting arranged by staff of the IBPN which was, as a consequence, elevated to considerable recognition among academic research institutions.

Vytautas' research in Russia has resulted in 5 monographs and over 100 scientific papers on helminthology, general parasitology, and biology. The results of many investigations, however, were

published in Russian, thus often appearing beyond the reach and knowledge of the western community. Importantly, 3 monographs were translated into English (Kontrimavichus, 1985b; Kontrimavichus and Delyamure, 1985; Kontrimavichus et al., 1985) due to financial support of the U.S. Department of Agriculture and the National Science Foundation (Fig. 3).

In 1982, Vytautas Kontrimavičius returned westward to his home-country, Lithuania, to direct the P. B. Šivickis Laboratory of Helminthology. He continued collaboration with his former students and colleagues in Russia, encouraging and supporting their research. Many parasitologists from the former Soviet Union Republics, both beginners and prominent researchers, visited Vilnius academic institutions and collaborated with Lithuanian parasitologists due to his encouragement. Many of them not only visited his laboratory but also lived in his friendly home. Due to initiative by Vytautas, the First All-Union School on Ecological Parasitology was arranged in Palanga, Lithuania in April 1983. Over 100 parasitologists interested in the ecology of parasites attended this meeting. He liked parasitology and was an optimist, believing in people. It was easy to work with him due to his permanent willingness to help colleagues, both young and established researchers. He was renowned for his patience and enthusiasm and critical interest in the work of colleagues and with students in developing careers. His impact in this arena was not limited to Russia, and essential collaborations and paths for communication for western students fortunate to work in Magadan, Chaun, and later Vilnius led to life-long connections and friendships.

In 1984, V. Kontrimavičius took a position as Director of the Institute of Zoology and Parasitology of the Lithuanian Academy of Sciences. Due to his initiative, the Institute of Ecology was established in Vilnius, and this academic institution became and remains a well-recognized center of parasitology research in the Baltic States. He loved to work with students and would spend much time in conversations. Discussions on the problems of general parasitology at regular seminars held by him for the postgraduate students had a fruitful influence on the formation of thinking in ecological parasitology by young parasitologists. He was progressive and always ready to adopt new approaches for his toolkit in parasitology. For example, he enthusiastically supported application of genetic markers in parasitology research early in the beginning of the molecular era. Eight students defended Ph.D. dissertations in Parasitology under his supervision in Lithuania and 8 in Russia. Among his Ph.D. student were representatives of China and Turkmenistan. Importantly, many of them continue in parasitology research today.

Leadership of research institutes was only a small part of his larger organizational contributions to parasitology. For many years, he led the Lithuanian Helminthological Society, the Scientific Councils of several research institutions in Vilnius, and was an active member of the Lithuanian Academy of Sciences (see Presidium of the Lithuanian Academy of Sciences, 2016). He was the Editor-in-Chief and a member of Editorial Boards of the journals *Parazitologija* (Russia), *Acta Parasitologica Lithuanica*, and others. Many parasitology conferences and other meetings were organized or initiated by him. Due to his initiative, the Baltic Society of Parasitologists was established in 1993; it has united parasitologists from Lithuania, Latvia, Estonia, Denmark, Finland, Poland, the U.K., and other countries. Several conferences on parasitology were

arranged, and world-level parasitologists were invited and gave plenary talks at these meetings in Vilnius. Among them were Clive Kennedy, Peter Nansen, Richard Ashford, Staffan Bensch, Andrey N. Alekseev, Karl Skirnisson, Hans-Peter Fagerholm, Oleg N. Pugachev, Kirill Galaktionov, Tellervo Valtonen, and many others.

Vytautas Kontrimavičius raised an idea to unite efforts of the parasitologists of Baltic and Scandinavian countries to promote the exchange of information and to encourage collaboration on parasitology in this region. In 1994, the first joint symposium of the Baltic Society for Parasitology and Scandinavian Society for Parasitology was held in Vilnius. In 2003, both these societies were united, and the Scandinavian Baltic Society of Parasitology was established (<http://sbsp.eu/>). Vytautas was an honorary member of this society.

Vytautas Kontrimavičius received many honors for his scientific contributions and among them was the E. Pavlovskij Golden Medal in 1987. In recognition for his long-term scientific research in parasitology, he was honored by the Lithuanian State Award in Science in 2000. Being already of senior age, he actively continued parasitology research. Together with his wife, Dr. Svetlana Bondarenko, he published a monograph entitled *Aploparaksidae of Wild and Domesticated Birds* (Bondarenko and Kontrimavichus, 2006). This book generalized the results of 40 yr of research by the authors on the morphology, taxonomy, and life cycles of cestodes of the family Aploparaksidae and related parasites. An essential part of the work is based on the authors' research in remote areas of Chukotka, the Taimyr Peninsula, the lowlands, the Enisey and Ob Rivers, Karelia, and Alaska. This volume, one of the most comprehensive works of systematics, biogeography, life history, and evolution to have been published in modern parasitology, recognizes the Aploparaksidae parasites among the most-fully studied of all cestode groups. Even more, due to excellent illustrations, detailed parasite descriptions, and general parasitology conclusions, the book is a prominent contribution not only to cestode taxonomy but also to wildlife parasitology.

Though retired, Vytautas often visited his home institution, P. B. Šivickis Laboratory of Parasitology at Nature Research Centre, Vilnius. His last plenary presentation, entitled *Parasitological Concepts: Plausible and Not*, was dedicated to his 85-yr jubilee which was celebrated in 2015. His exceptional work in parasitology and science organization is the story of an extraordinary lifetime during extraordinary times and a life-long dedication to science on a global stage. Vytautas was and will always be an outstanding person who gave much of himself for science and his family. In part, this history is outlined among

several papers that describe the activities and ideas of Vytautas in detail (Arnastauskienė and Jakimavičius, 1995; Jakimavičius, 2001).

In sadness we have lost a dear friend, and the world has lost a true ambassador of parasitology, science, and good will. Vytautas Kontrimavičius loved nature and spent much time in his old house with Svetlana Bondarenko and their family in the Molėtai District beyond Vilnius, located close to beautiful Lake Stirniai. Many Lithuanian and foreign parasitologists visited this lovely place, discussing parasites and spending nice times with him and his family over wonderful meals and in the warmth of the banya near day's end. Vytautas' wish was to be buried here, near the foot and in the cradle of a great oak that stands above the landscape.

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LITERATURE CITED

- ARNASTAUSKIENĖ, T., AND A. JAKIMAVIČIUS. 1995. Academician Vytautas Kontrimavičius (upon the occasion of the 65th anniversary of his birth). *Acta Zoologica Lituanica. Parazitologia* **25**: 58–66.
- BONDARENKO, S. K., AND V. KONTRIMAVICHUS. 2006. Fundamentals of cestodology, Volume 14: Aploparaksidae of wild and domesticated birds, S. O. Movsesyan (ed.). Nauka Press, Moscow, Russia, 441 p.
- JAKIMAVIČIUS, A. 2001. The evaluation of the long-term parasitological research. *Acta Zoologica Lituanica* **11**: 419–422.
- KONTRIMAVICHUS, V. (Ed.) 1985a. Beringia in the Cenozoic Era. Balkema, Rotterdam, The Netherlands, 724 p.
- KONTRIMAVICHUS, V. L. 1985b. Helminths of mustelids and trends in their evolution. Amerind Publishing Company, New Delhi, India, 607 p.
- KONTRIMAVICHUS, V. 1969. Vy Helminth fauna of mustelids and ways of its formation. Nauka Press, Moscow, Russia, 432 p.
- KONTRIMAVICHUS, V. L., AND S. L. DELYAMURE. 1985. Filaroids of domestic and wild animals. Fundamentals of nematology, Volume 29. Amerind Publishing Company, New Delhi, India, 183 p.
- KONTRIMAVICHUS, V. L., S. L. DELYAMURE, AND S. N. BOEV. 1985. Metastrongyloids of domestic and wild animals. Fundamentals of nematology, Volume 26. Amerind Publishing Company, New Delhi, India, 298 p.
- PRESIDIUM OF THE LITHUANIAN ACADEMY OF SCIENCES. 2016. Academician Vytautas Kontrimavičius (1930 01 22–2016 09 20). *Lietuvos mokslų akademijos žinios* **78**: 16 (in Lithuanian).

Gediminas Valkiūnas and Romualda Petkevičiūtė, Nature Research Centre, Akademijos 2, LT-08412 Vilnius, Lithuania.