

Memory of Vladimir Longinovich Kazenas

Izbasar I. Temreshev^{1,2}

1 LLP "Agro Consult", 010010, Astana, Almaty district, 21 Kanysh Satbaev st., Republic of Kazakhstan

2 LLP Kazakh Scientific Research Institute of Plant Protection and Quarantine named after Zh. Zhiembayev, Almaty, Republic of Kazakhstan

Corresponding author: Izbasar I. Temreshev (temreshev76@mail.ru)

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Vladimir Longinovich Kazenas (April 14, 1941 – May 25, 2024)

On May 25, 2024, after a serious illness, a senior colleague, a prominent scientist, Doctor of Biological Sciences, Professor Vladimir Longinovich Kazenas, left us.

Vladimir Longinovich Kazenas was born on April 14, 1941 in Almaty into a scientific and pedagogical family. His father Longin Damazievich Kazenas was a famous plant pathologist, candidate of agricultural sciences. Head of the Department of Phytopathology of the Kazakh Research Institute of Plant Protection. Mother Taisiya Grigorievna is an English teacher who gave private lessons. He developed an interest in wildlife during his school years. In 1958, Vladimir Longinovich graduated from high school in the village of Verkhnyaya Kamenka (Almaty oblast of the Republic of Kazakhstan) with a gold medal and entered the biological faculty of the Kazakh State University (now Al-Farabi Kazakh State National University). Under the guidance of the famous entomologist Professor P.I. Marikovskiy, in 1963, he defended his thesis on digger wasps of the genus *Ammophila* of South-East Kazakhstan, for which he was awarded the All-Union Entomological Society Prize. In the same year he graduated from the Kazakh State University and for some time worked as a teacher of biology and chemistry in a secondary school in the village of Zhetysu (near the village of Chemolgan, Almaty oblast), but was soon called up to serve in the Soviet Army. According to his recollections, during his military service in the army he did not stop collecting insects, although he had to hide the collections in the nightstand by his bed from inspections.

In 1966, Vladimir Longinovich entered graduate school at the Institute of Zoology of the Academy of Sciences of the Kazakh SSR. In 1969, he defended his dissertation for the degree of Candidate of Biological Sciences on the topic “Digger wasps of South-East Kazakhstan.” From 1969 to 1972 – junior researcher at the Institute of Zoology of the Kazakhstan National Academy of Sciences (Almaty, Kazakhstan), then senior researcher (1972–1986), leading researcher (1986–1992), chief researcher (1992–1995). In 1987, Vladimir Longinovich successfully defended his doctoral dissertation on the topic “Digger wasps (Hymenoptera, Sphecidae) of Kazakhstan and Central Asia, their morphology, biology, distribution, systematics and economic significance” at the dissertation council of the Zoological Institute of the USSR Academy of Sciences (now Russian Academy of Sciences) in Leningrad (now St. Petersburg). In January 2001, the Higher Attestation Committee of the Republic of Kazakhstan, at the request of the Academic Council of the Institute of Zoology of the Ministry of Education and Science of the Republic of Kazakhstan, decided to award V.L. Kazenas with the academic title of professor of biology. In 1992, he headed the Department of Invertebrate Zoology, and in 1995, the Laboratory of Entomology, which he headed for 12 years.

For a long time, Vladimir Longinovich was a member of the commission on the Red Book of Kazakhstan, a member of the presidium of the Kazakhstan-Central Asian Zoological Society, and the editorial boards of the journals “Selevinia” and “Tethys Entomological Research”. For several years he was the scientific secretary of the expert council on biological sciences of the Higher Attestation Committee of the Republic of Kazakhstan, a member of the special council for the defense of

dissertations of the Institute of Zoology of the Ministry of Education and Science of the Republic of Kazakhstan, the scientific secretary of the special council of the Institute of Zoology of the Ministry of Education and Science of the Republic of Kazakhstan, chairman of the Kazakhstan branch of the All-Union Entomological Society. Also, Vladimir Longinovich was a member of the dissertation council of the Kazakh Research Institute of Plant Protection and Quarantine. He was a member of the International Society of Hymenopterists. He collaborated closely with specialists from Russia, Kyrgyzstan, Ukraine, and entomologists from many Western European countries and the USA.



Speech at the International Scientific Conference “Zoological Research for 20 Years of Independence of the Republic of Kazakhstan”, 2011.

Vladimir Longinovich has repeatedly participated in the preparation and implementation of scientific and scientific-applied programs related to the study, conservation and use of biodiversity of the Republic of Kazakhstan. Participated in the preparation of the National Program of the Republic of Kazakhstan “Conservation and Sustainable Use of Biodiversity of Kazakhstan” (1995), “Program of International Scientific and Technical Cooperation in the Field of Conservation and Sustainable Use of Biological Diversity” (1995), Republican Program “Scientific Basis for the Conservation of the Diversity of the Fauna of Kazakhstan and rational use of its resources” (1996), “Kazakh National Strategy for the Conservation and Sustainable Use of Biological Diversity” (1996), etc. Participated in the preparation of primary materials for the international project on the conservation and balanced use of biodiversity of the Western Tien Shan (1998). Repeatedly conducted exami-

nation of scientific projects in biology at competitions of the Ministry of Education and Science of the Republic of Kazakhstan (1999–2004). He was often the chairman of sections and a member of the editorial board at various conferences.

Under the leadership of Vladimir Longinovich, four graduate students prepared and successfully defended their candidate's dissertations, and two more young applicants were working on candidate's dissertations. He also taught at the biological school-lyceum No. 48 for 7 years.

Vladimir Longinovich studied the fauna, taxonomy, ecology, biology and distribution of several families of hymenopteran insects - solitary digger wasps (Sphecidae, Crabronidae, Ampulicidae and Pompilidae) in Kazakhstan and Central Asia. He quite fully identified the fauna of burrowing wasps in Kazakhstan and Central Asia (about 1000 species), moreover, more than 250 were discovered in this territory for the first time and over 300 species were discovered for the first time in Kazakhstan. About 160 species were described by him as new to science. He obtained new data on the biology of more than 200 species. For the first time, all available data on the biology, ecology and geographic distribution of burrowing wasps in the region were summarized, and assumptions were made about the ways of formation of the fauna of the territory as a whole and in its individual zoogeographical regions. The identified fauna was assessed by him from the point of view of practical significance (Kazenas 1970, 1978, 1984, 1986, 1987a, b, 1998, 2000, 2001, 2011, 2012, 2014a etc). In addition, Vladimir Longinovich constantly painstakingly collected materials on other groups of insects during numerous expeditions to Kazakhstan and Central Asia. Subsequently transferred to other specialists for processing, they served as the basis for the description of a number of species new to science. The patronym *kazenas* was assigned to 11 new species, for example, the robber fly *Ktyr kazenas* Lehr, 1981, gall midge *Ephedromyia kazenas* Fedotova, 1993, braconid wasp *Chelonus kazenas* (Tobias, 2001), ground beetle *Leistus kazenas* Kabak, 2015, digger wasp *Podalonia kazenas* Danilov, 2017.

Vladimir Longinovich published a total of more than 300 scientific papers. He took part in the preparation of the Key to insects of the Russian Far East (Nemkov et al. 1995), the Book of the Genetic Fund of Kyrgyzstan (Kazenas, Zonshtein and Milko 1996), the Red Book of the Kazakh SSR (Kazenas 1991), the Red Book of the Republic of Kazakhstan (Kazenas 2006). In addition to digger wasps, Vladimir Longinovich, together with well-known specialists in these groups, studied other insects - velvet wasps (Mutillidae), mammoth wasps (Scoliidae), dragonflies (Odonata) (Milko and Kazenas 2005; Leley, Ovchinnikov and Kazenas 2009; Borisov and Kazenas 2017; Borisov, Kazenas and Borisov 2022; Borisov and Kazenas 2023). One of his works, which provided great assistance to other scientists, was a bibliography of the works of Kazakh entomologists, published by him in collaboration with his wife Nina Grigorievna Romanenko (Kazenas and Romanenko 2006a, b; 2007). Another of his works, which also turned out to be very popular, was an article on faunogenesis and geological history of Kazakhstan, co-authored with the famous kazakh paleontologist Bulat Uapovich Baishashov (Kazenas and Baishashov 1999).



Expedition to the Korgalzhyn Nature Reserve, Central Kazakhstan, 2012.

After retiring and leaving the Institute of Zoology of the Ministry of Education and Science of the Republic of Kazakhstan, Vladimir Longinovich participated in joint scientific projects with the Kazakh Research Institute of Plant Protection and Quarantine named Zh. Zhiembaev. The result was the release, with the active participation of Vladimir Longinovich, of several articles (Temreshev et al. 2016; Esenbekova et al. 2017; Slivinsky, Kazenas and Temreshev 2019), two books (Temreshev et al. 2015; 2016) and recommendations for monitoring ground and aquatic ecosystems of Southern Kazakhstan with the help of invertebrate animals (Slivinsky et al. 2017), as well as obtaining a certificate of authorship on the paper wasp *Polistes gallicus* as a biological indicator of pollution of terrestrial ecosystems with organochlorine pesticides (Slivinsky et al. 2016).

In addition, he carried out joint work with other specialists on the study and monitoring of stem pests and their entomophages in the Ile-Alatau State National Natural Park. Subsequently, two manual books were published on the identification of stem pests and their entomophages (Temreshev, Kazenas and Esenbekova 2016; Temreshev and Kazenas 2017), several articles were identified as new for Kazakhstan, the families of hymenoptera Ibalidae and Orussidae were clarified, and the distribution of some species of horntails Siricidae was clarified and Xiphidriidae (Kazenas and Temreshev 2015; 2016a, b; Kazenas, Temreshev and Esenbekova 2016). Materials on entomopathogenic fungi collected during this work were then included in the microbiological collections of the Kazakh Institute of Plant Protection and Quarantine named Zh. Zhiembaev and the Research and Production Center for Microbiology and Virology of the Republic of Kazakhstan (Temreshev et al. 2016). Thanks to the discovery of Vladimir Longinovich, a dangerous quarantine pest was discovered on the territory of Kazakhstan – the leaf beetle *Callosobruchus phaseoli* (Gyllenhal, 1833) (Temreshev and Kazenas 2020).

In addition to insects, Vladimir Longinovich's scientific interests included ornithology. In co-authorship with the famous Kazakh ornithologist Nikolai Nikolaevich

Berezovikov, he published several articles in the Russian Ornithological Journal devoted to new finds of birds in Kazakhstan, their nutrition and other features (Berezovikov and Kazenas 2019; 2022; Kazenas and Berezovikov 2022, etc.).



Expedition to the Syrdarya River, Southern Kazakhstan, 2015.



Forest pathological monitoring in the State National Natural Park Ile-Alatau, 2016.



Joint inspection of wood material for pests and phytopathogens with a leading researcher of the Scientific and Production Center for Microbiology and Virology of the Republic of Kazakhstan E.T. Ismalova, 2016.

Vladimir Longinovich was actively involved in the popularization of science, being the author of a series of books “Animals of Kazakhstan in photographs”, as well as the author of other popular science books dedicated to various animals and the nature of Kazakhstan (Kazenas and Nikolaev 2004; Kazenas, Gromov and Timokhanov 2007; Kazenas and Baizhanov 2009; Childebaev and Kazenas 2013; Zhdanko and Kazenas 2014; Kazenas and Barkalov 2014; Kazenas 2014a, b, c, d; Kazenas, Malikova and Borisov 2014; Kazenas 2017; 2018; 2020; 2022 etc.). Many of them, at his request, were sent by me to the founder of the electronic library “Flora and Fauna” Alexey Borisovich Shipunov for placement in it. In addition to his own works, Vladimir Longinovich scanned a large number of scientific and popular science books, which were also then placed in the above-mentioned electronic library. In this way he was of great help to many scientists.

In addition, Vladimir Longinovich was very passionate about photographing wildlife. He provided his photographs absolutely disinterestedly. Many of his works were subsequently used to illustrate such important scientific and practical publications as books on Italian and Moroccan locusts published under the auspices of the Food and Agriculture Organization of the United Nations (Sergeev et al. 2016, 2022; Lachininsky et al. 2023).

In communication and work, Vladimir Longinovich always remained a very intelligent person, polite and friendly, always trying to help with advice and deeds if he was asked for it. He was also very modest and unpretentious both in everyday life and in the field. At the same time, Vladimir Longinovich had a wonderful sense of

humor; he loved to joke, as well as both listen and tell various funny situations from his extensive field and laboratory experience. Another hobby of Vladimir Longinovich was gardening on his personal plot, the fruits of which he generously shared with friends and colleagues. At the same time, he was engaged in an important matter closely related to this area – the breeding of useful Hymenoptera (entomophages and pollinators). To do this, sparing no time and labor, Vladimir Longinovich made artificial nests for single wasps and bees from scrap materials, which he placed in his garden. He then handed over some of them to the employees of the entomology laboratory of the Kazakh Research Institute of Plant Protection and Quarantine named after Zh. Zhiembaev for placement in apple orchards, in which experiments were carried out on the biological protection of plants from pests.



Bird photography in the Korgalzhyn Nature Reserve, Central Kazakhstan, 2014.

Deep condolences regarding the departure of Vladimir Longinovich were expressed by many domestic and foreign colleagues – the leadership of the Kazakh Research Institute of Plant Protection and Quarantine named Zh. Zhiembaev represented by director B.A. Duisembekov and many of his employees, as well as Zh.D. Ismukhambetov (National Academy of Sciences of the Republic of Kazakhstan), V.G. Meka-Mechenko (Kazakh Scientific Center for Zoonotic and Quarantine Infections named after M. Aikimbaev), E.T. Ismailova (Research and Production Center for Microbiology and Virology of the Republic of Kazakhstan), R.V. Yakovlev (Altai State University, Russia), V.Yu. Kryukov (Novosibirsk Institute of Systematics and Animal Ecology SB RAS, Russia), A.V. Lachininsky (Food and Agriculture

Organization of the United Nations), F.A. Gapparov (Uzbek Research Institute of Plant Protection, Uzbekistan), E.O. Kokanova (National Institute of Deserts, Flora and Fauna, Turkmenistan), and many others.



Garden care, Almaty, 2017.



Work with artificial nests for beneficial Hymenoptera (entomophages and pollinators), Almaty, 2017.

The bright memory of the outstanding scientist and wonderful person Vladimir Longinovich Kazenas will always live in the memory of his colleagues and friends.

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