



## **Victor R. Dolnik, 1938–2013**

Authors: Payevsky, Vladimir A., and Chernetsov, Nikita

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IN MEMORIAM

## Victor R. Dolnik, 1938–2013

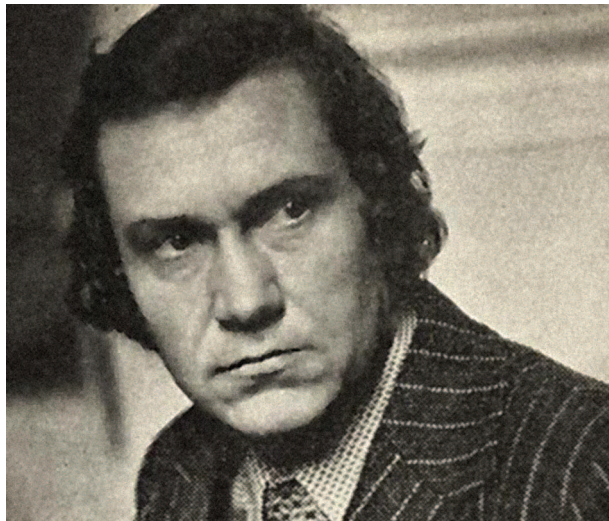
Vladimir A. Payevsky<sup>1</sup> and Nikita Chernetsov<sup>2\*</sup>

<sup>1</sup> Zoological Institute, St. Petersburg, Russia

<sup>2</sup> Biological Station Rybachy, Rybachy, Russia

\* Corresponding author: [nikita.chernetsov@gmail.com](mailto:nikita.chernetsov@gmail.com)

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Victor R. Dolnik was elected a Corresponding Fellow of the AOU in 1970 and an Honorary Fellow in 1977. He was born in 1938 in Sverdlovsk, USSR (now Yekaterinburg, Russia), into a family of engineers and passed away after a long illness on November 4, 2013, at his home in St. Petersburg.

After graduating from high school in 1955, Victor sought and gained admittance to Leningrad (St. Petersburg) University, not Moscow University. He had good reason to do so. Biology in the USSR was still strongly influenced by the pseudoscientific spirit of Trofim Lysenko's teachings, and the faculty of biology of Leningrad University was then the only place in the Soviet Union where genetics was taught by true scientists who asked their students at the first lecture to forget everything they had been told in high school about biology.

Dolnik started his research career in 1960 in a quiet corner of the former East Prussia, on the nearly unpopulated Courish (Curonian) Spit on the Baltic coast, in Rybachy (formerly Rossitten), where the world's first bird observatory, Vogelwarte Rossitten, had been active in

1901–1944. In that migration hotspot, Johannes Thiene-mann started the world's first large-scale bird-banding project, which made that place famous before World War II. Vogelwarte Rossitten was resuscitated in 1956 by Prof. Lev Belopolsky as the Biological Station Rybachy (because it included not just ornithologists but also marine biologists and parasitologists) of the Zoological Institute in Leningrad. A team of young biologists from Leningrad, Moscow, Estonia, and Latvia worked on the Courish Spit. Dolnik was distinctive among his colleagues for his ability and his clear vision of future research. So it was no wonder that he soon became a valuable deputy of Lev Belopolsky. When the latter accepted an invitation to become a professor at Kaliningrad University, Dolnik was appointed the Biological Station's director in 1967, at the age of 29.

The first mission of the Biological Station was organization of mass standardized trapping and banding of birds, mainly passerines, that migrate over the Courish Spit in huge numbers. This has been done in large stationary funnel traps, the so-called Rybachy-type traps, that are modeled on Heligoland traps but, unlike them, allow capture of birds in active migratory flight up to 12 m above ground. This type of funnel trap quickly became popular in the former Soviet Union and, later, beyond it. The traps allowed the Rybachy to become the top banding site in the USSR. The reporting rate of bands was relatively high even in songbirds, because many of them migrated through the densely populated countries of Western Europe. It made it possible to publish the *Atlas of Bird Migration on the Courish Spit* in 1971 (an English translation was published in the United States in 1973).

At the time, the main objective of mass banding was obtaining long-distance recoveries. However, later it appeared equally important that right from the start, the trapping project had been standardized by timing, trapping effort, and handling and measuring techniques, which made it possible to use the data for the analysis of long-term dynamics of avian numbers and timing of migration. In the 1960s, the topic of global climate change and its

impact on wildlife had hardly been discussed by anyone, but data collection had already started.

Since the late 1960s, the research interests of Dolnik gradually moved toward bioenergetics, migration physiology, and photoperiodic control of seasonal events in animal annual cycles, so his work in migration biology was concentrated on bioenergetic adaptations to migration. One of the main topics of experimental and field work was studying the processes occurring in the migrant's body during fattening and use of fuel. During this period, Dolnik, together with his disciple and friend Valery M. Gavrilov, wrote a number of papers on ecophysiological aspects of avian migration (i.e. on the relationship between fuel stores and migration, the role of fat depots in metabolic regulation, seasonal change in responsiveness to photoperiod, and the energetics of molt). These studies were summarized in his monograph "Migratory Disposition in Birds" (Moscow, Nauka Publishers, 1975). Dolnik became involved in orientation and navigation research at about that time.

Looking back, it is apparent that Dolnik established, as the main working principle of the Biological Station Rybachy, the combination of field and experimental research—and the combination of work and daily life of the researchers, in the semiofficial environment of the station's building in the village of Rybachy and the quite unofficial environment at the *Fringilla* field site. The name of the site honors the most common bird on the Courish Spit, the Chaffinch (*Fringilla coelebs*)—most common both on passage (more than 700,000 Chaffinches have been banded by now) and during breeding. The Chaffinch became the lab rat, and it is no wonder that the monograph "Population Ecology of the Chaffinch" was edited by Dolnik (Moscow, Nauka Publishers, 1982).

Lab research on avian energetics in varying physiological conditions was an important aspect of Dolnik's experimental studies. It was aimed at measuring energetic costs of different types of activity and made it possible to develop a method of calculating the daily energy budget of free-living birds from their daily activity budgets. These results were published in his monograph "Energy and Time Resources of Free-living Birds" (St. Petersburg, Nauka Publishers, 1995).

As a long-time director of the Biological Station Rybachy (1967–1989), Dolnik not only pursued his own studies but organized the work of others in the framework of large research projects. One such project was the study of avian migration across arid and mountainous areas in (then Soviet) Central Asia in the 1980s. This project, performed in parallel with the efforts of European (mainly German and Swiss) ornithologists studying how birds crossed the Sahara Desert, unfortunately remained incomplete. Most valuable data collected in the areas that were difficult to access then (and are even more difficult to access now) are published mainly in Russian.

Most of Dolnik's active career was during the Cold War and behind the iron curtain. Dolnik, like few of his colleagues in the Soviet Union, strived for the unity of global research, including the USSR. He demanded that his collaborators not only read but write and publish in English, even though this was hindered not only by linguistic challenges but also by the political restrictions of that time. In the 1960s through 1980s, attendance at international meetings by Soviet researchers was made very difficult, especially for those who, like Victor, were not members of the ruling party and did not bother to conceal their skepticism toward Soviet authorities. However, he not only promoted the recent advances of international colleagues but was in constant contact with many of them, including Americans Donald Farner and Samuel Charles Kendeigh. Dolnik took a most active part in preparation of the 18th International Ornithological Congress in Moscow in 1982, which played a pivotal role in overcoming the isolation of Soviet ornithologists.

In 1989, Dolnik left his position at the Biological Station Rybachy and moved to the Ornithology and Herpetology Lab of the Zoological Institute in Leningrad (St. Petersburg). However, his working style continued to thrive and bear fruits in Rybachy. When the political situation changed and active international contacts ceased to be censured, Dolnik's former collaborators and disciples were able to benefit most from it, because they had been prepared by Dolnik.

Dolnik always actively disseminated biological knowledge beyond academic circles, starting from his early popular book on avian movements, *Enigmatic Migration* (1968). Together with Prof. Mikhail Kozlov, he coauthored high school textbooks on zoology. A very special place in his activities is taken by the book *Naughty Child of the Biosphere: Conversations about Human Behavior in the Company of Birds, Animals, and Children*. It is considered by many an excellent explanation of ethology's most burning questions in a clear and nonstandard manner. This book has been published in six editions and remains very popular in the Russian-speaking world.

Speaking of the Courish Spit and the Biological Station Rybachy, one cannot but mention the atmosphere there, where Victor—smart, fiery, always keen to tell jokes and play friendly practical jokes—had a special place. Evening parties, discussions of the hustle and bustle in our small community and in the larger world, interspersed by joking and then, spontaneously, discussion of a serious scientific issue, were a regular pattern of that time. Victor was always at the center of such parties.

Victor Dolnik is greatly missed by ornithologists and other biologists. He will be remembered as a most talented researcher who uncompromisingly searched for truth in various fields of biology. One can safely say that a whole epoch in avian migration and animal bioenergetics research is closely connected with the name Victor R. Dolnik.