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AWARDS

The 80th Anniversary of Academician P.L. Gorchakovskii

Pavel Leonidovich Gorchakovskii, an outstanding botanist, is the greatest authority on the plant world of the Urals. He is the author of more than 400 scientific publications, including 13 monographs. Numerous scientific expeditions organized by Gorchakovskii provided invaluable data on the plant world of the Urals (from the northern to the southern boundary) and the adjacent areas of Western Siberia and Kazakhstan.

Gorchakovskii devoted many of his studies to the analysis of trends in the zonal and altitudinal distribution of the plant cover and the dynamics of phytogeographic boundaries. He proposed an original concept of zonal differentiation of the plant cover in the Urals. In some works, he analyzed the dynamic processes occurring in the plant cover and characterized the composition, structure, and productivity of tundra, forest, meadow, and steppe plant communities. The diversity of vegetation in the Ural region was cartographically reflected in numerous geobotanical maps made by the research team headed by Gorchakovskii.

In the course of long-term studies, Gorchakovskii and his colleagues described the composition of high-mountain flora, revealed trends in the distribution of plant communities, analyzed their dynamics, and made the classification of high-mountain forests, meadows, tundras, and stone (so-called goltsy) deserts (*The Flora and Vegetation of the Ural High Mountains*, 1966). The monograph *The Plant World of the High-Mountain Urals* (1975) is still among the world's best compendiums dealing with the regional high-mountain vegetation. In the book *Phytoindication of Environmental Conditions and Natural Processes in High Mountain Regions* (Gorchakovskii and Shiyatov, 1985), the authors described specific features of plants and their communities formed under extreme conditions and laid the theoretical and methodological groundwork for assessing parameters of the environment by analyzing the characters of plants and communities formed by them.

Gorchakovskii revealed basic stages in the formation of the flora and vegetation in the Urals since the Neogene to the present time, which proceeded under changing environmental conditions. In the monograph *Main Problems in the Historical Phytogeography of the Urals* (1969), he demonstrated the significance of the Ural mountain land as a center of floristic endemism, indicated the foci of endemism and the sites where endemic plants concentrate, and described relict elements of the flora. In the monographs *Plants of European Forests at the Eastern Boundary of Their Range* (1968) and *Broadleaved Forests and Their Place in the Plant Cover of the Southern Urals* (1972), he characterized the distribution of plants belonging to the nemoral complex and their specific ecological features at the eastern boundary of the range. The book *Forest Oases in the Kazakh Hillocks* (1987) contains the description of unique botanical objects, including communities with a complex of boreal relicts. The results of studies on endemic, relict, and other rare plants are also reviewed in the book *Rare and Disappearing Plants of the Urals* (Gorchakovskii and Shurova, 1982).

Gorchakovskii has devoted close attention to studies providing a scientific basis for the conservation of floristic and phytocenotic diversity. He was among the authors of the *Red Data Book of the Russian Federation* and among the authors and editors of the *Red Data Book of the Middle Urals* (1966) and *Red Data Book of the Yamalo-Nenets Autonomous Area* (1977). His recommendations were used for justifying the protective status of many natural landmarks, national parks, and wildlife refuges.

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Gorchakovskii comprehensively analyzed the consequences of anthropogenic impact on the plant cover and revealed basic trends in the anthropogenic transformation of plant communities. One of his major achievements is the development of theoretical and methodological bases of botanical monitoring. He formulated the concept of synanthropization as the strategy of plant adaptation to environmental conditions transformed or created by man. In particular, this concept was implemented in the monograph *Anthropogenic Transformation of Meadow Phytocenoses and Restoration of Their Productivity*, which was published in 1999.

Gorchakovskii's studies, making a major theoretical contribution to plant ecology and geobotany, are also of great significance for accomplishing practical tasks, such as the assessment, prognosis, and monitoring of anthropogenic changes in the vegetation and the conservation of the plant cover. Their results are well known from numerous publications in Russia and abroad, presentations at international scientific meetings, and lectures given at universities in Austria, Germany, Italy, France, the Czech Republic, and Poland.

For four decades, Gorchakovskii has been working at the Institute of Plant and Animal Ecology (Ural Division, Russian Academy of Sciences). He organized the Laboratory of Plant Ecology and Geobotany and founded an original school of botanists–phytoecologists. Specialists of this school are now actively working in the Urals and other regions. One of his former students is a member of the Academy of Sciences of Estonia, nine received a doctoral degree, and more than fifty have a candidate degree in science. Gorchakovskii has devoted a lot of time to education and training for research work, conducting courses at the Ural State University named after Gor'kii and Ural Forestry Engineering Academy for many years.

Gorchakovskii is a member of the council of the Russian Botanical Society, chairman of its Yekaterinburg division, and deputy chairman of the special dissertation council at the Institute of Plant and Animal Ecology. He had been deputy editor-in-chief of *Ekologiya* for 20 years since the journal was founded; today, he is a member of editorial boards of the journals *Ekologiya* and *Botanicheskii Zhurnal.*

For achievements in the development of scientific research and education of young specialists, Gorchakovskii was awarded the title of Honored Scientist, several medals, and the Order of the Badge of Honor (in commemoration of the 275th anniversary of the Russian Academy of Sciences). Together with other authors of the *Red Data Book of the Middle Urals*, he received the Tatishchev and De Gennin Medal and Memorial Prize. Gorchakovskii was elected a honorary member of the Russian Botanical Society and several foreign scientific societies, and one of the peaks in the Ural Mountains was named after him.

Colleagues, students, and the editorial board and staff of our journal sincerely congratulate Pavel Leonidovich Gorchakovskii and wish him good health and success in his work.