

A History of Russian Forestry and Its Leaders



**V. K. Teplyakov. Ye. P. Kuzmichev,
D. M. Baumgartner, and R. L. Everett**

The cover picture is a burning place in the Shyrovkov Forest Range in the Brezuluk Forest in 1927. Standing from right to left are Professor D.V. Shirokov, Professor V. N. Sukachev, Forest Manager Detsky, Professor M. Ye. Trachenko, and six other forest managers, officers, foresters.

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A HISTORY OF RUSSIAN FORESTRY AND ITS LEADERS

*Dedicated to the 200th
anniversary of the creation of
the Forest Department in Russia*

"Forestry is the child of necessity."

(G. F. Morozov)

"...Until now the Russian contribution has been ignored by the creators of forestry in Russia, undoubtedly to the great detriment of the field. You will never see a quote from Maier, Teploukhov, Bode, Skarzhinski or Levis in our forestry textbooks. There is much we could learn from the work of these men."

(A.F. Rudzky)

"The classical works, even when they have become out-dated in some respects, are, in essence, always young and always serve to inspire the reader. ...In general, we are barely familiar with our masters, and we study them almost never."

(G. F. Morozov)

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Foreword

*“Not by the mind is Russia understood,
Nor is she measured by a common rule;
She has a special stature of her own;
In Russia one can only put his faith.”*
(Fedor Tiutchev, 19th century Russian Poet)

*“Russian Forests are not only
our national property and pride,
but also our national responsibility
to the entire human civilization.”*
(Valery Shubin, Chief, Federal Forest Service of Russia, 1997)

To western foresters and others, the forests and forestry of Russia have long been an enigma. Yet as the following chapters describe, the history of Russia's forestry and its leaders is long, rich, and significant. The contributions of Russian forests have for too long been poorly understood and undervalued in the western world.

With this book, we hope readers will gain a sense of appreciation for this magnificent country, its rich history, and some of its past great foresters, scientists, and educators. There is much to learn from others around the world, and with changes taking place in the “new” Russia, we have an opportunity to share with each other in a manner which has not been previously possible.

For foresters in the western world, this historical perspective was available previously only in small pieces and brief vignettes. Yet our past and present problems, and scientific developments have much in common. How can we not benefit by working together, pooling our knowledge and energies to manage and care for the world's forests? What synergies and new innovations will the future bring?

Russian foresters face many problems and opportunities as the Russian transition continues into the future. Will there be difficulties and mistakes? Of course! but can a country with such a proud history of forestry innovators and innovations not find a sound and proper path to the future? Of course it can and will!

It is imperative that forests of Russia are properly and sustainably cared for and managed. This is an issue not only for Russia's future, but also for the peoples of the world. The rich Russian forests play a vital role in the health of planet earth and in providing forest products and amenities necessary for the world's growing population.

Russia is a vast area covering approximately 6.6 million square miles or an area nearly twice as large as the United States. Russian forests comprise 22% of the world's total forests and over half of the world coniferous forest area and world coniferous growing stock.

The following words by Valery Shubin, Chief of the Federal Forest Service of Russia, (Russian Forests, 1997) are wise and show promise that Russia will have forestry leaders, scientists, and educators to meet the challenges of the future and to build on the country's rich history:

Being an ecological frame of the Earth's biosphere, the Russian forests that occupy 69 percent of the total land area of the Russian Federation account for more than 20 percent of the global forest resources. That is why ensuing sustainable and sound forest use, protection and restoration of Russian forests represents not only a national but also a global task of vital importance for the entire mankind.

Regarding the amount and diversity of their ecological functions, forests are of special value as compared with other natural complexes. They provide for regulation and cleaning of water flows, soil

conservancy and improvement in natural fertility, the most complete conservation of genetic diversity, enrichment of atmosphere with oxygen, prevention of air pollution and formation of a climate.

Forests are a source of many ecologically clean food resources for satisfying diverse needs of people; they represent a human environment conducive to maintaining people's spiritual and physical health. Therefore, forests serve as a central link in nature conservancy and natural regulation of overwhelming majority of environmental processes. It is the forests that are a natural base contributing to human survival.

Maintenance and enhancement of national forest resources, the principal goal of efforts of the Federal Forest Service of Russia, can be attained by means of implementation of sustainable forest management. This means that forestry should ensure a sound use of forest resources, functions and benefits that are of value for present and future needs of human civilization. Of special value is the balance of interests of different population groups, industries and forest administration bodies, with respect to forest utilization within specific areas, available timber and nonwood resources, their processing, development of relevant economic structures providing for the employment of all population groups, without causing any damage to environmental quality and biodiversity of forests.

This book was written for the non-Russian reader. The reason to write the book was obvious: to acquaint western foresters with the leading figures of Russian forestry and their work. Russian authors have been frustrated by limited opportunities to publish in the West and western foresters have had an unfulfilled curiosity about Russia. An answer to the eternal question faced by Russian authors, how to get published, was found when the Federal Forest Service of Russia, the U.S. Forest Service, and Washington State University began collaborating on several projects. The authors became professional colleagues and friends, and decided to jointly produce this book.

This book is intended for scientists, students, and specialists in the fields of forest ecology, forest use, forest reclamation, forest regulation, forest protection and preservation, and other aspects of forestry. The authors hope the book will also be useful to those interested in forest history and policy development, environmental science and resource use.

We hope this book enlightens, entertains, and opens new doors for communication between Russian and English speaking peoples on the wise use and conservation of soil and vegetation resources that we jointly depend upon for our continued well-being.

The authors express their deep gratitude to Susan Graham and Matvei Finkel of Russian-American Island in Spokane, Washington for translating Russian portions of the manuscript into English, to Dennis Brown, Washington State University, for editorial assistance, and to Marlene Guse of the Department of Natural Resource Sciences at Washington State University for publication layout and design.

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Introduction

It is difficult to overestimate the role of the forest in Russian life. The well-known Russian historian V. O. Klyuchevskiy wrote, "*The forest served the Russian people in a number of ways: economically, politically and even morally. They built with pine and oak, they heated with birch and aspen, they lighted their cabins with birch splinters, they shod themselves with bast, and made household tools of linden. For centuries in the north, as in earlier times in the south, the forest fed the economy with the pelts of fur-bearing animals and the honey of the forest bees. The forest served as a dependable refuge from external enemies who burdened the Russian people with sorrow and chains...*"¹

Over many centuries, forest science in Russia developed along its own distinct path. Its roots lie in the folklore and the keen powers of observation of the Russian people. For example, the slash and burn method of agriculture was mirrored in the ancient Russian calendar and in the calendars of other Slavic peoples (Belorussians, Poles, Ukrainians, Czechs, etc.). January on the old Russian calendar was called *Cutting Time* (in Russian *sechen* and in modern Ukrainian *sichen*), as if designating the time to cut the forest. March was called *Beriozozol* (berezen in Ukrainian, brezets in Czech), the time to burn the cut birch trees and turn them to ash. *Beriozozol* is from the word for birch, and birch forests were most often cut and made into fields, for the soil in birch forests was always more fertile than in pine forests. Because spring arrives later farther to the north, the name *Beriozozol* there stood not for March, but for the month following March. *Lipets* (Ukrainian *lipen*) stood for July, the month when the lindens bloom.

Because the soil of the forests with broad-leaf and broad-leaf needle trees, often called "*under the oak soil*," was highly fertile, logging in the forest steppe zone gave way to hay fields and pasture land in the areas close to the cities, towns and villages.

Black forest was the widespread folk name for oak, birch, aspen and other deciduous forests, especially in the southern and southwestern part of the country. This name arose from the sharp contrast of the black silhouettes of the leafless trees in winter against the white snow. There is also the concept of the *red forest*, which is applied mainly to light coniferous forests of pines which have a reddish bark. It is also often associated with coniferous forests in general because of their beauty in all seasons of the year (the Russian word *krasniy*, which means red, is used here in its old meaning of beautiful, like Red Square in Moscow). In contemporary forestry literature these terms are no longer used, but they were widely applied in earlier times.²

Not all forested land was appropriate for agriculture. As early as the 15th century forested land was divided into arable and non-arable. Bogs, for example, belonged to the latter category.

I. S. Melekhov in his book *Silvics* noted that, "*the shortened folk terms denoting various types of forests, were expressive and capacious, reflecting the forest's practical significance. Terms such as kholm, "hill" (a spruce forest on a rise); belomoshnik "white moss" or smolokurniy bor "dense resin woods" (a pine forest with lichen covering dry areas); subolot, "sub-swamp" (pine growing in wet areas); sogra (boggy spruce forest with grassy ground cover), rada (pine growing in a swamp). The Russian peasant knew where he could get the best building materials, where he could distill tar, where he could hunt hazel grouse, quail, wood grouse and other game birds, and where he could cut the best hay.*"³

Thus, more than 500 years ago the foundation was laid for the future sciences of phenology, forestry regulation, and forest typology. Leaders in the field of forestry became renowned because their work is universally known, universally recognized, and has eternal value. The great forestry scientists were also excellent teachers; they taught in the universities, institutes, and schools of Russia. Many received excellent training, including study abroad. Important government leaders and naturalists of the time had no forestry experience, but even they had an affinity for the forest, its needs, and its role in the life of the people. All of the giants in the field, who are mentioned here, as well as those who are not mentioned, are teachers, teachers in the greatest sense of the word.

¹ Klyuchevsky, V. O. 1987. *The Course of Russian History in: Works in 9 Volumes*. Moscow, Mysl. Vol. 1, Pt. 1, p.83.

² See, for example: D. Kaigorodov. 1897. *Conversations on the Russian Forest, Black Forest, Deciduous Forest*. 4th edition, corrected and supplemented, St. Petersburg, Suvorin Publications. 178 pp.
Also, D. Kaigorodov. 1899. *Conversations on the Russian Forest, Red Forest, Coniferous Forest*. 4th edition, corrected and supplemented, St. Petersburg, Suvorin Publications. 130 pp.

³ Melekhov, I. S. 1980. *Silvics*. Moscow, Forest Industry. p.326-327.

The authors tried to avoid numbers and descriptions of Russia forests. In the last decade, many publications on Russian forests, forest resources, and forestry became available.⁴

Chapter 1, shows the main historical developments in forest use, the formation of forest property rights, forest legislation, forest policies and forest management. The chapter gives the prehistory and background for the development of forest sciences in Russia, the publication of works on forestry, the founding of forest science institutions and the growth of scientists and scientific schools.

Chapter 2 presents biographical information and excerpts from the works of the founding fathers of forestry and forest science.

Chapter 3 is a compilation of the works of soil scientists, geobotanists, and forest ecologists. This is included with purpose, since it is impossible to separate the forest from the soil.

Chapter 4 is a collection of materials about scientists who made the greatest contribution to the development of Russian forestry, forest inventory, forest management, and the theory of forest use.

Unfortunately, or perhaps fortunately, it is impossible to encompass the unencompassable. The book is not large. That is good: if someone picks it up and looks through it but decides not to read it, they haven't wasted much time or money; and another, who does read it, may ask the authors for a sequel. And there is much to write about. Very, very much!



⁴ Teplyakov, Victor K. 1994. Forestry Education in Russia. Forestry Chronicle. November-December. No. 70/6. p. 700-703.
On the Ecological and Economic Impacts of the Wood Harvesting and Trade in North-West Russia. 1996. Oy Feg-Forest and Environment Group Ltd. Joensuu, Finland. 152 pp.
Atlas on the Biological Diversity of the European Russia and Adjacent Territories. 1996. IUCN The World Conservation Union, Moscow, Office. Project No. 75126. Moscow. 144 pp, including 143 maps.
Russia: Forest Policy During Transition. 1997. The World Bank Country Study. Washington, D.C. 279 pp.
Potential of the Russian Forests and Forest Industries. 1997. International seminar for forestry and forest industry specialists. May 14-16, 1997 at Moscow, Russia. University of Joensuu, Finland - Russian Institute of Continuous Education in Forestry, Pushkino, Russia. Research Notes 61, University of Joensuu, Faculty of Forestry. 144 pp.

Authors

Victor K. Teplyakov is a Director of the Department of Science and Technics with the Russian Federal Forest Service. For three years he served as a Deputy Director of the Research Department.

In 1977, he received a diploma with honors in Forestry at the Department of Forest Management at the Moscow Technical Forest Institute (now Moscow State Forestry University). From 1977 to 1993, Teplyakov was an assistant and associate professor in the Department of Forest Management and Protection at that Institute (University), where he taught forest biometry, operations research, forest cruising and inventory, forest management, urban forestry, and Russian forest history. In 1985 he received a Ph.D. in forestry and forest management. For 3 years he served as Associate Dean of Forestry Faculty. His professional interests include ecological forest management and regulation, forest policy, geographic information systems implementation, long-term forest statistics, environmental education, international forestry, and forest history.

Victor K. Teplyakov was a visiting scholar for the 1988/1989 academic year at the University of Massachusetts at Amherst; in 1992/1993 he spent an academic year as a Charles Bullard Fellow at Harvard University; and in 1994 he completed the 11th International Seminar on Forest Administration and Management at the University of Michigan.

He is the author and co-author of more than 80 scientific and professional publications, including about 15 textbooks, books, handbooks, and 10 manuals for students, ranging from forest biometry and mensuration to forestry education and history.

V. K. Teplyakov is a Deputy coordinator of the IUFRO Division 4, and a member of several honor societies in Russia and abroad, including SAF and Forest History Society (USA).

Yevgeny P. Kuzmichev is a Deputy Chief of the Federal Forest Service of Russia, member of the Board. Before this position, he served as its Director of the Scientific Department.

In 1975, he received a diploma in Forestry at the Department of Forest Pest and Diseases Control at the Moscow Technical Forest Institute (now Moscow State Forestry University). From 1975 to 1979, Kuzmichev worked as an engineer at the Les Project Association, and then as a Senior engineer at the All-Union Research Institute of Silviculture and Mechanization of Forestry. Since 1979, he has been a post-graduate student, junior and senior researcher, an assistant and associate professor at the Department of Forest Pest and Disease Control (later renamed as Department of Industrial Ecology and Forest Protection) at the Moscow Technical Forest Institute (University), where he taught forest phytopathology, techniques of forest protection, and environmental studies. In 1983, he received a Ph.D. in biology at the Ural Technical Forest Institute (Sverdlovsk) and second doctorate in 1994 in biology at the Moscow State Forest University. His professional interests include forest ecology, forest phytopathology, protection of trees in cities, environmental education, and international forestry.

Yevgeny P. Kuzmichev studied Sustainable Forestry and Ecosystem Management at Washington State University in 1995.

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Yevgeny P. Kuzmichev is a member of several honor societies and committees. He is a member of the Board of the Russian Society of Foresters, the Scientific Committee on Forest of the Russian Academy of Sciences, the Scientific Committee on Forestry and Afforestation of the Russian Academy of Agricultural Sciences, the Interagencies Commission of Climate Change and others.

David M. Baumgartner, Ph.D. and CF (Certified Forester and Fellow, Society of American Foresters), is Professor and State Extension Forester, Department of Natural Resource Sciences at Washington State University (WSU), Pullman. He has a Ph.D. in Forest Management, Policy, and Administration from Michigan State University. He directs Washington's extension forestry and natural resources program which promotes sustainable forest stewardship management on the state's forestlands. Has conducted more 200 symposia and workshops for over 15,000 professionals. He has authored or co-authored more than 120 publications. He received the National Technology Transfer and Extension Award from the Society of American Foresters and the Washington State University Sahlin Faculty Excellence Award for Public Service. Served on various national, regional, and state committees including the Secretary of Agriculture's Advisory Committee on State and Private Forestry. One of the initiators of the national US Forest Service Silviculturist Continuing Education and Certification program and chaired the committee which established the national Society of American Foresters' Continuing Education and Professional Development Recognition Program. With Richard Everett, conducts the intensive course "Ecosystem Management and Landscape Ecology" as part of the Natural Resource Institute sponsored by Washington State University, the University of Washington, and Oregon State University. Has traveled extensively in Russia. Russian experience includes: conducting intensive courses in the U.S. for Russian natural resource leaders; conducting training sessions in Russia for Russian natural resource leaders; and with Richard Everett and the Russian Federal Forest Service is conducting a cooperative ecosystem research project "An Assessment of Forest Structure Supported by Unaltered Forest Ecosystems in Siberian Forest Reserves and Comparison with Altered Forest Homologues in USA Forests".

Richard L. Everett is retired science team leader for the Forest Health and Restoration Team of the US Department of Agriculture, Forest Service, Pacific Northwest Research Station, Wenatchee Forestry Sciences Lab. He has a B.S. in biology and a M.S. in range science from the University of Nevada and a Ph.D. in rangeland resources and forest soils from Oregon State University. He has worked professionally with the Intermountain and Pacific Northwest Research Stations, USDA-Forest Service for over 25 years. He is adjunct faculty at Washington State University, University of Idaho, Oregon State University and the University of Washington and co-authored over 60 of his 110 professional papers with the faculty of those Universities. His research emphasis is in landscape and disturbance ecology of inland forests and rangelands of the Pacific Northwest. Special emphasis has been given to developing concepts for land managers that provide for the concomitant conservation of sensitive species and habitats and the larger ecosystems in which they exist. Dr. Everett led the Eastside Forest Ecosystem Health Assessment, prepared for members of the U.S. Congress as assigned by the Chief of the Forest Service, which has been used as the template for follow-up large scale assessments in the Pacific Northwest. Dr. Everett continues to develop the disturbance management concept as a means to conserve ecosystem integrity, while providing forest and rangeland products to meet increasing human needs. Dr. Everett currently teaches ecosystem management principles in the U.S., Canada, and Russia. He has participated in USAID training in Russia and in the U.S. in collaboration with Dr. Baumgartner of Washington State University. Dr. Baumgartner and Dr. Everett currently are completing cooperative work with the Russian Federal Forest Service in defining snag and log loadings in undisturbed Russian forests for comparison with altered U.S. forest systems.