

## SYSTEMATICS AND EVOLUTIONARY GENETICS OF CONIFERS

**Goncharenko, G. G.: Systematics and Evolutionary Genetics of Forest Forming Conifers of the Palaearctic** [Genosistematika i Evolyutsionnaya Filogeniya Lesoobrazuyushchikh Khvojnykh Palearktiki Геносистематика и Эволюционная Филогения Лесообразующих Хвойных Палеарктики]. Tekhnalohiya, Minsk, Byelorussia. 188 pages. ISBN 985-6234-78-6. [In Russian].

European forest geneticists frequently tend to think about European forests only to the West of the 30° meridian. They forget that in fact, Europe is only a "peninsula" of the Eurasian continent, with biodiversity and gene pools depleted by Ice Ages. The territory of the former U.S.S.R. has always been inaccessible (even for East-Europeans), and as such, it was not interesting. The Soviet geneticists (including forest geneticists) have formed a world for themselves at that time, absorbing much of the scientific knowledge from outside, but keeping their own results almost for themselves. At the beginning of the nineties, the situation has changed and step by step we realize how much work has been done there. The reviewed book compiles the results of long-term investigations on the intraspecific and interspecific differentiation of Eurasian (mainly boreal) conifers.

The author deals with three genera: *Pinus*, *Picea* and *Abies*. A general introduction describes the systematics and distribution of conifer species in northern Eurasia and the technical principles of isozyme analysis along with the basics of population genetics. In separate sections, the problems of the taxonomy and phylogeny of species and subspecific taxa of the three genera are discussed.

The section on pines is the most extensive one. Two-needle and five-needle pines are dealt separately. The author analyzes the differentiation among intraspecific taxa within *Pinus sylvestris* and *Pinus brutia*. The first species occupies a vast range from the Atlantic to the Pacific coast of Eurasia, so that it is quite logical that an intraspecific differentiation including forming of different varieties can be expected. For the latter species, the author attempts to clarify the taxonomical

status of intraspecific taxa, which are sometimes considered separate species (*P. pityusa*, *P. stankewiczii*). Further on, interspecific variation among six species of the section *Sylvestres* is analyzed (*P. sylvestris*, *P. mugo*, *P. nigra*, *P. halepensis*, *P. brutia*, and a Far-East endemic *P. funebris*). For five-needle pines, the author provides results for five species: *P. cembra*, *P. sibirica*, *P. kora-iensis*, *P. pumila* of the subsection *Cembrae* and *P. peuce* of the subsection *Strobi*.

In the section on spruces, the author discusses the problems of the taxonomical complexes *Picea abies*/*P. obovata* and *P. schrenkiana*/*P. tianschanica*. In detail, genetic differentiation and phylogenetic relations among *P. abies*, *P. obovata*, *P. glehnii*, *P. ajanensis* (syn. *P. jezoensis*), *P. orientalis*, and *P. schrenkiana* are analyzed.

Similarly, the author deals with differentiation and phylogeny of European and Siberian firs *Abies alba*, *A. nordmanniana*, *A. sachalinensis*, *A. nephrolepis*, *A. sibirica*, and a Central Asian endemic species with very limited range and consequently very restricted genetic variation, *A. semenovii*. Inheritance of isozyme systems in the species of the respective genus is given at the beginning of each section.

Why is this book written in Russian? This would be a good question. I estimate that among the potential readership, those who understand this language are in a minority. A detailed English summary with references to tables and figures would be very useful, but unfortunately, it is missing. Anyway, this book would deserve an English translation or a publication in the form of an English-written review article to make it accessible for a wider public.

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