

THE FEDERAL STATE BUDGET SCIENTIFIC INSTITUTION  
CENTER FOR FOREST ECOLOGY AND PRODUCTIVITY  
OF THE RUSSIAN ACADEMY OF SCIENCES

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**POPULATION PATTERNS OF TREE SPECIES  
WITHIN THE FLOODPLAIN OF A MEDIUM-SIZED PLAIN RIVER  
(A CASE STUDY IN THE NATURAL STATE RESERVE  
“BOLSHAYA KOKSHAGA”)**

Edited by Dr. in Biol. O.I. Evstigneev

Moscow 2019

УДК 574.3+630.11+630.231

ББК 43.8

Б87

Braslavskaya T.Yu. Population patterns of tree species within the floodplain of a medium-sized plain river (a case study in the Natural State Reserve “Bolshaya Kokshaga”). Edited by Dr. in Biol. O.I. Evstigneev. – M.: Publishing House «Tsifrovichok», 2019. – 114 p.

ISBN: 978-5-91587-200-3

The monograph presents the results of a study of the demographic structure of tree species populations in the floodplain landscape under the conditions of the conservation regime. Most of the research was conducted in old-growth dark coniferous-broad-leaved and broad-leaved forests, preserved due to a relatively weak previous anthropogenic impact; populations forming in meadows where mowing has been stopped are also studied. It has been revealed that the structure of tree populations depends on species-specific resistance not only to inundation, but also to shading (as well as in watershed forests). Other environmental factors, acting in the past (various forms of land-use activity, extremely low winter temperatures) or continuing to influence at present (pathogens, phytophages), are comparable with inundation by intensity of impact on tree species. As a result of the complex impact of these factors, partial or almost complete differentiation of ecological niches used by different species is observed across the landscape. Judging by the demographic structure, in contemporary short- and medium-inundated forests, the most stable are numerous populations of small-leaved linden. And in long-inundated open woodlands, small populations of black alder and verrucose birch. Amongst the rest tree species – Norway spruce, Siberian fir, pedunculate oak, smooth elm – the demographic composition and number of populations in the forests vary significantly depending on random local combinations of factors; their recruitment is not stable, the perspectives of the populations are uncertain. At this, oak regeneration, in contrast to all other species, revealed intensive invasion in former-haying meadows; this process can ensure the preservation of oak populations in the floodplain landscape. The monograph is addressed to forest ecologists, geobotanists, landscape experts, environmentalists, teachers and graduate students of universities.

*Published by decision of the Academic Council  
of the Center for Forest Ecology and Productivity of the Russian Academy of Sciences*

Reviewers: Dr. in Biol. S.I. Chumachenko  
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The monograph was prepared as part of the state assignment of Federal State Budget  
Scientific Institution Center for Forest Ecology and Productivity  
of the Russian Academy of science (AAAA-A18-118021990059-5)

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