

P92**From West to East and back again: Trans-Siberian Railway as a continental pathway of plant invasions**

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Abstract

The rapid increase of invasions worldwide is associated with the intensification and expansion of trade and transport, and access to new source species pools. The presented project contributes to (i) understanding the role of human-mediated pathways (based on the model system of Trans-Siberian railway, Транссибирская магистраль, Transsibirskaya magistral, TSR) in translocating plant species, (ii) elucidating the biogeographic patterns of their spread, and (iii) predicting the invasion risk of alien species along TSR in the future. The railway, which spans across much of Eurasia, provides a unique study system for analysing the spread of alien plants over a large scale. It connects two continents comprising differing native species pools and since more than 50% of foreign trade and transit cargo in Russia is transported via the TSR, its role in the unintentional movement of plant species is crucial. Because TSR is so isolated there is little interaction with other traffic networks in contrast to e.g. Europe, where it is nearly impossible to disentangle the influence of road and railway networks on species introductions. Within the project, we will combine (i) field inventory of alien and native plants along the TSR corridor, (ii) laboratory experiments aimed at the identification of plant species' reproductive and dispersal traits, and (iii) analysis of socioeconomic vectors and biogeographic drivers associated with alien species dispersal. The project will thus contribute to understanding the role of human-mediated pathways (based on the model system of TSR) in translocating plant species, elucidating the biogeographic patterns of their spread and predicting the invasion risk of alien species spreading along TSR in the future. Lastly, this study will contribute to improving the knowledge about alien plant species in temperate Asia.