



Euro-Asiatic transcontinental provenance experiment on Scots pine (*Pinus sylvestris* L.)

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BASIC INFORMATION ON THE EXPERIMENT

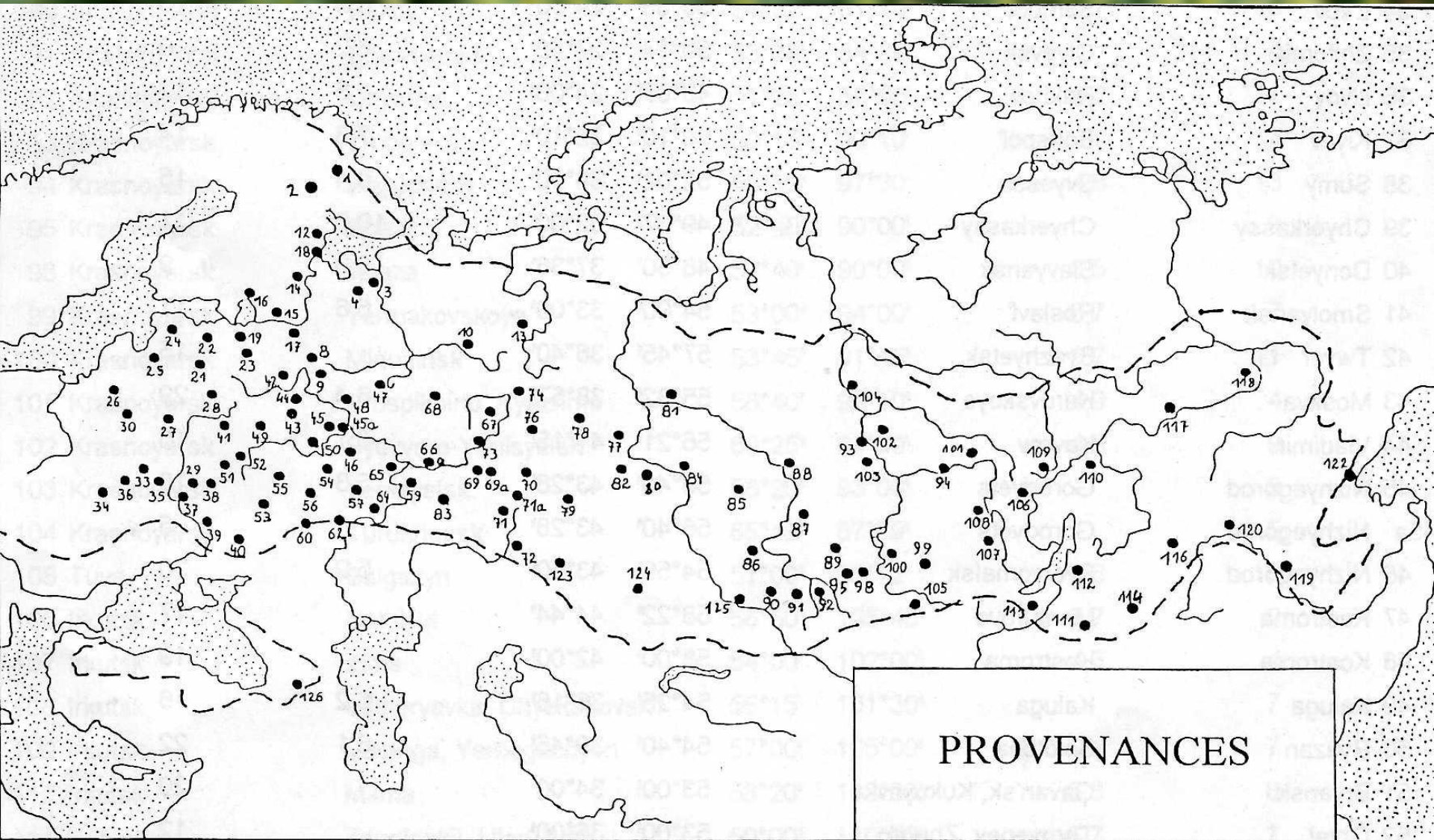
Initiative: All-Union Forest Research Institute
at Pushkino near Moscow

Author of program: Ye. P. Prokazin

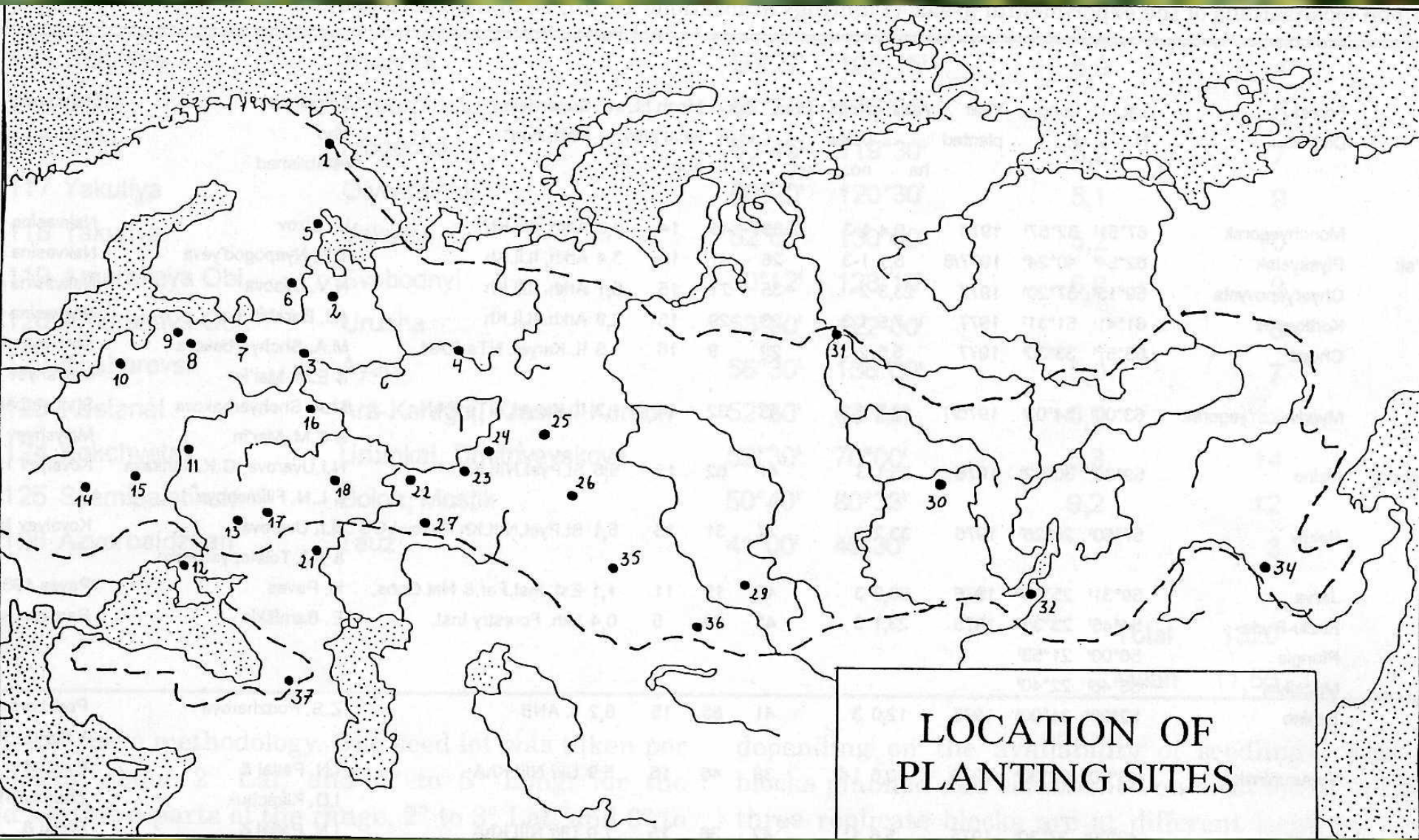
Establishment of experiment: 1976

Number of provenances: 113

Number of planting sites: 33



PROVENANCES



LOCATION OF
PLANTING SITES

CURRENT STATUS OF THE EXPERIMENT

Countries with the experimental sites on their territories:

Azerbaijan	1
Belarus	1
Estonia	1
Kazakhstan	2
Lithuania	1
Russian Federation	23
Ukraine	4

Height Growth Variation in a Comprehensive Eurasian Provenance Experiment of (*Pinus sylvestris* L.)

By A. M. SHUTYAEV¹⁾ and M. GIERTYCH²⁾

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(Received 26th May 1997)

Summary

In the years 1974 to 1976, on the initiative of the Forest Research Institute in Pushkino, near Moscow, a major Scots pine experiment was established with 113 provenances over 33 planting sites, well scattered over the whole former USSR. Basing on reports from co-operating institutions information is compiled on the provenances used, on the planting sites and on the mean tree height at latest measurement. Interaction parameters are calculated and the data on tree heights,

converted to units of standard deviation from location means, is plotted onto maps of the locations demonstrating the extent of genotype environment interaction. The range of the species in the former USSR can be divided into regions (North-western, Baltic, Western Continental, Northern Russia, Central European Russia, Middle Volga, Central Trans-Urals, Southern fringe, Eastern Siberia), that have characteristic for them responses to seed transfer in terms of height growth performance at various locations. Western populations (Baltic

Genetic Subdivisions of the Range of Scots Pine (*Pinus sylvestris* L.) Based on a Transcontinental Provenance Experiment

By A. M. SHUTYAEV¹⁾ and M. GIERTYCH²⁾³⁾

(Received 16th February 2000)

Summary

Studies were continued on the variability of 113 Scots pine provenances based on an experiment established at 33 locations in the former USSR in 1974 to 1976. Following on the

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analysis presented earlier for height measurements (SHUTYAEV and GIERTYCH, 1997) now an analysis is made of data on survival, stem diameter and stem straightness. A synthetic volume estimate (based on height, diameter and survival) was evaluated for phenotypic stability. On the basis of growth performance in various environments the range of Scots pine in the former USSR is divided into 10 regions (A- to J) and these divisions are compared with earlier attempts at subdividing this vast area. There is agreement in the opinions about

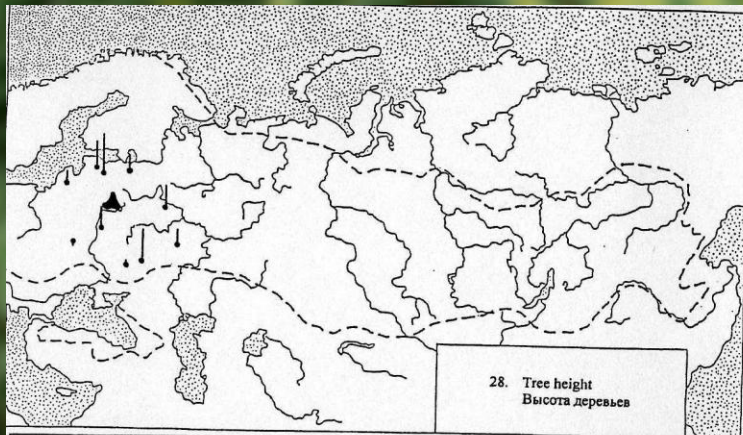
A.M. Shutyaev and M. Giertych

А.М. Шутяев и М. Гиертыч

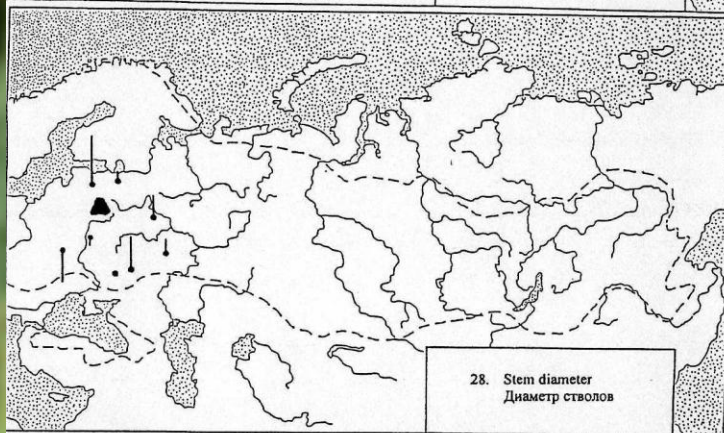
**Scots pine (*Pinus sylvestris* L.) in Eurasia
– a map album of provenance site interactions**

**Сосна обыкновенная (*Pinus sylvestris* L.):
альбом карт взаимодействия популяций и условий
мест их испытания в евроазиатской части ареала**

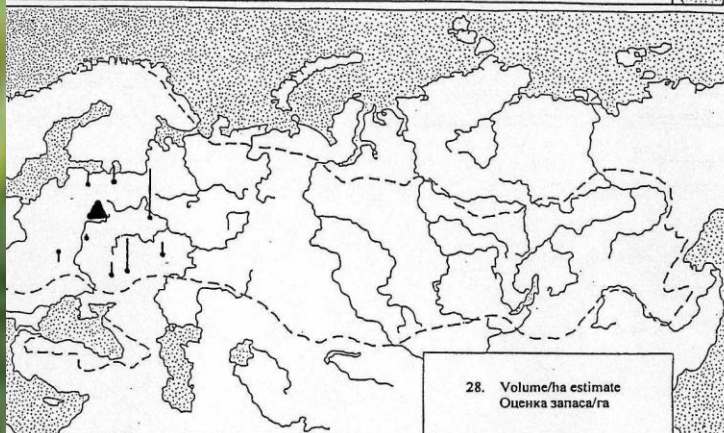
Kórník 2003



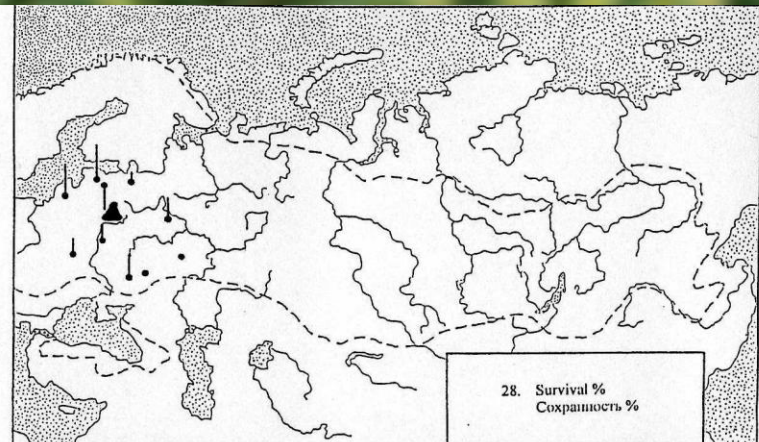
28. Tree height
Высота деревьев



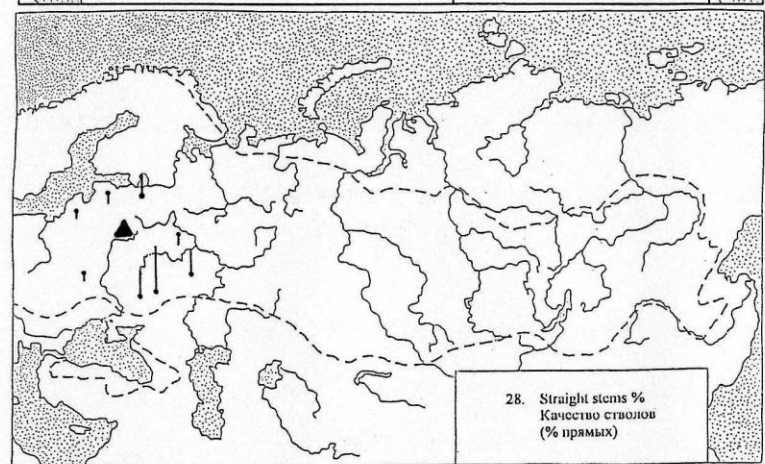
28. Stem diameter
Диаметр стволов



28. Volume/ha estimate
Оценка запаса/га



28. Survival %
Сохранность %



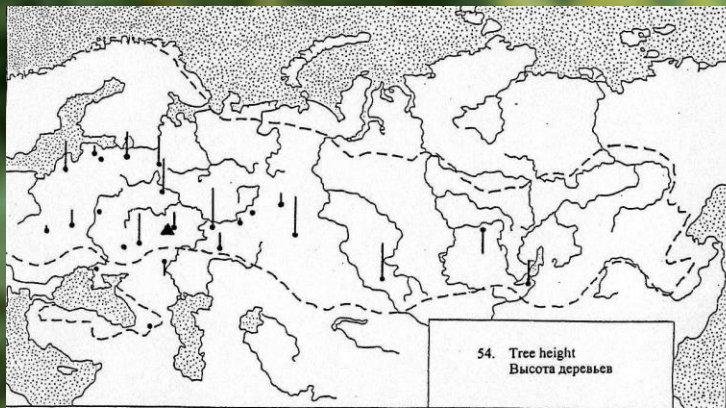
28. Straight stems %
Качество стволов
(% прямых)

№ 28. 56°00'N, 29°20'E zone C III
Vitebsk Prov., Rossony For. Distr., Belarus

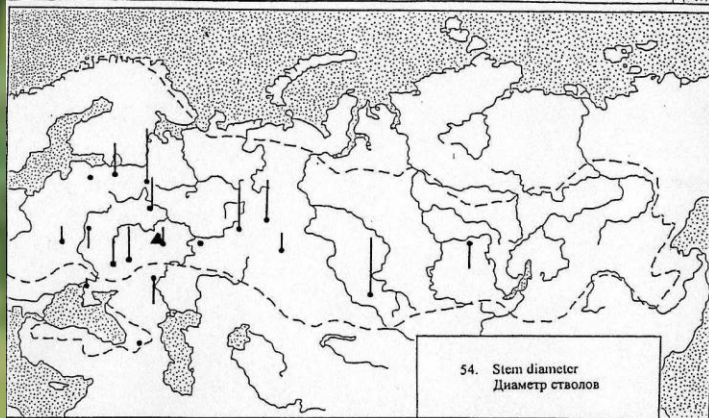
Growth almost everywhere very good, with good and medium survival. Stems straight but their quality declines on western sites.

№ 28. 56° 00' N, 29° 20' E регион C III
Витебская обл., Россонский лесхоз, Беларусь

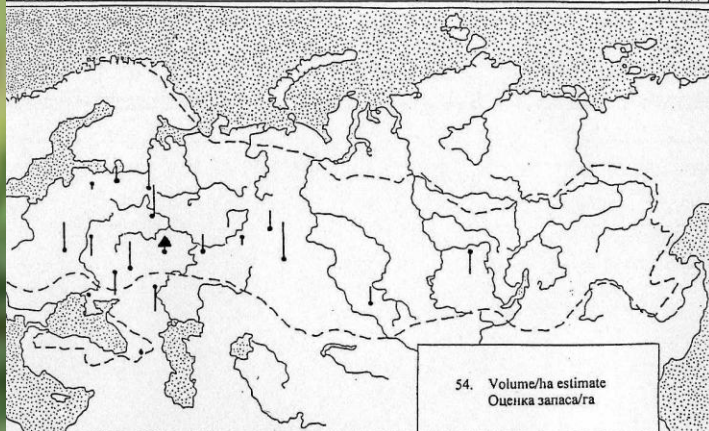
Интенсивность роста почти везде хорошая, при хорошей и средней сохранности. Стволы прямые, в западных пунктах качество ухудшается.



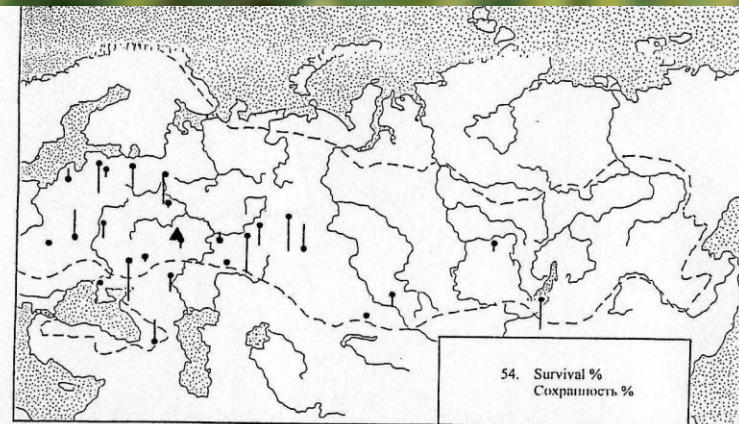
54. Tree height
Высота деревьев



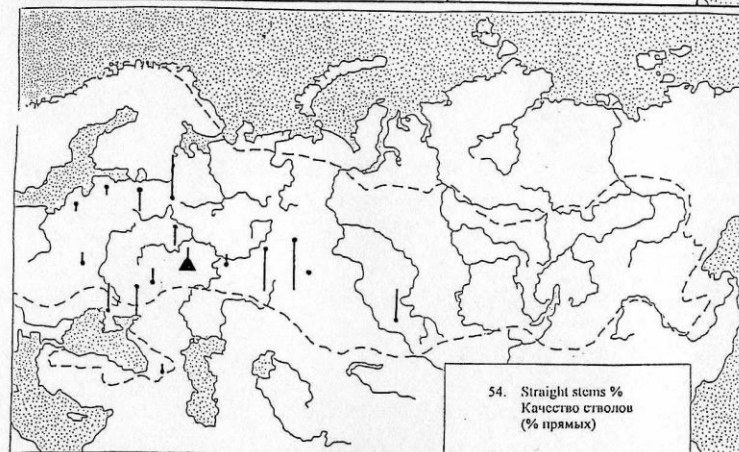
54. Stem diameter
Диаметр стволов



54. Volume/ha estimate
Оценка запаса/га



54. Survival %
Сохранность %



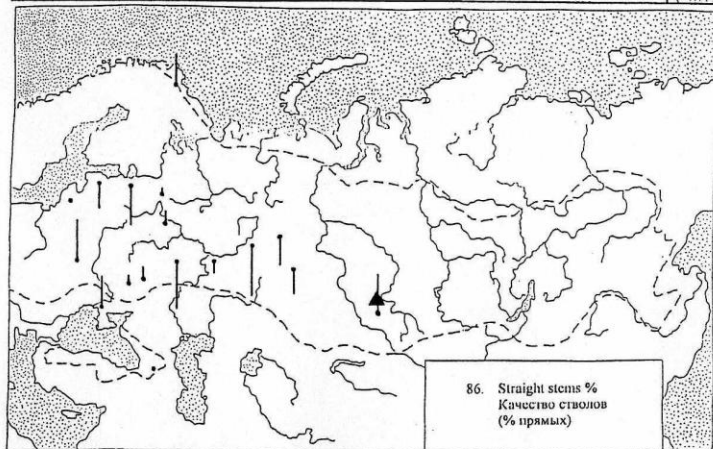
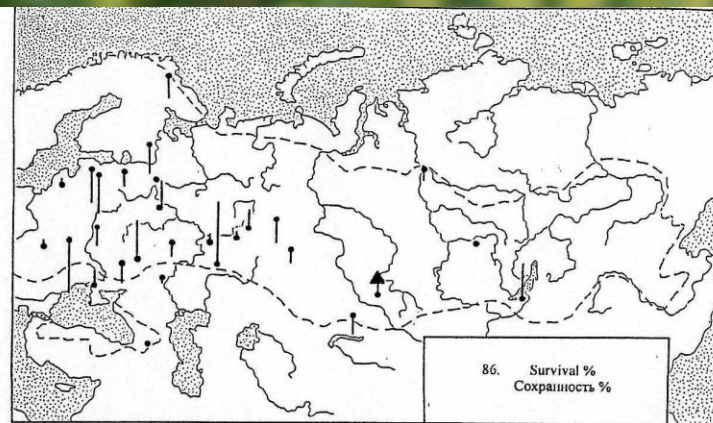
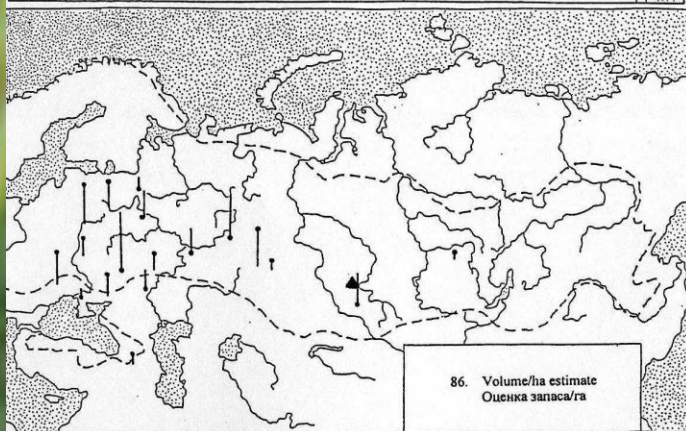
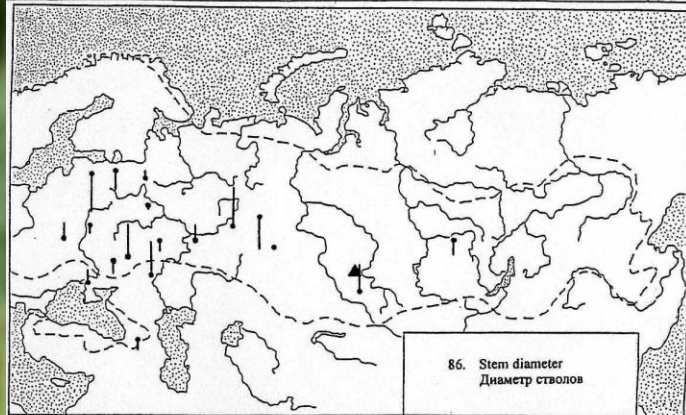
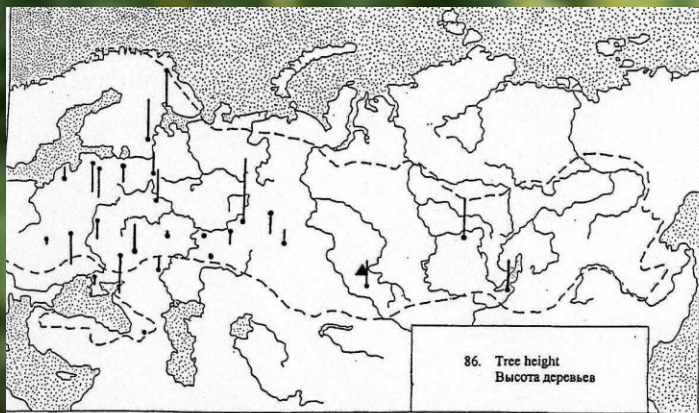
54. Straight stems %
Качество стволов
(% прямых)

№ 54. 53°12'N, 41°20'E zone F III
Tambov Prov., Chelnovaya, Sosnovka For. Distr., Russia

Survival generally poor, in places medium. Growth parameters in most places very good except in central Siberia and on the Caucasus. Stems straightness variable.

№ 54. 53° 12' N, 41° 20' E регион F III
Тамбовская обл., Челновский лесхоз, Россия

Сохранность пониженная, местами средняя. Показатели роста в основном очень хорошие за исключением центральной Сибири и Кавказа. Прямизна стволов изменчива.

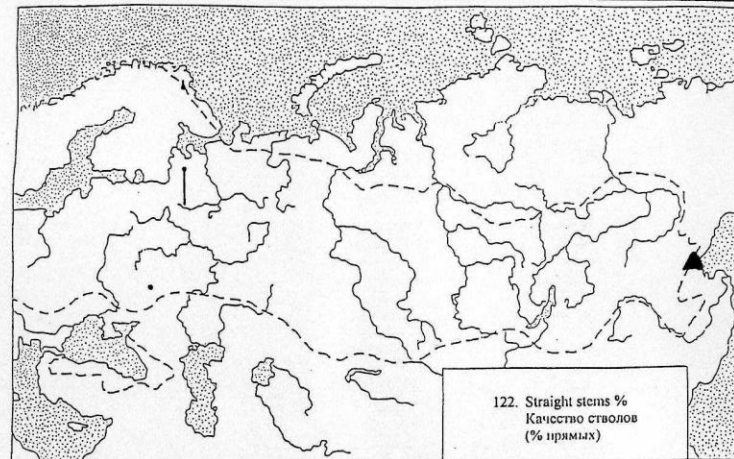
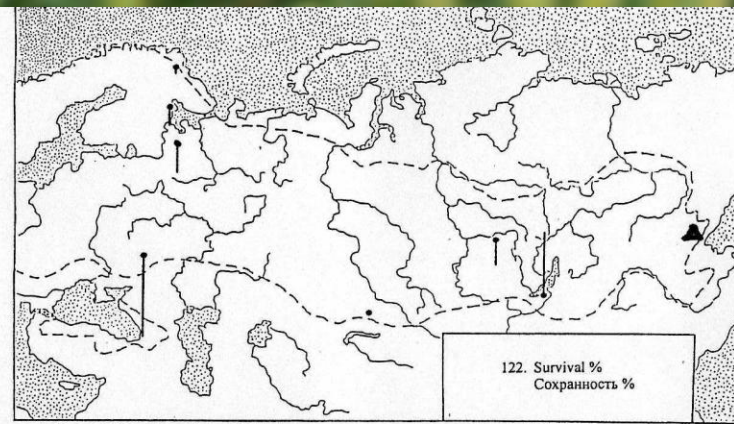
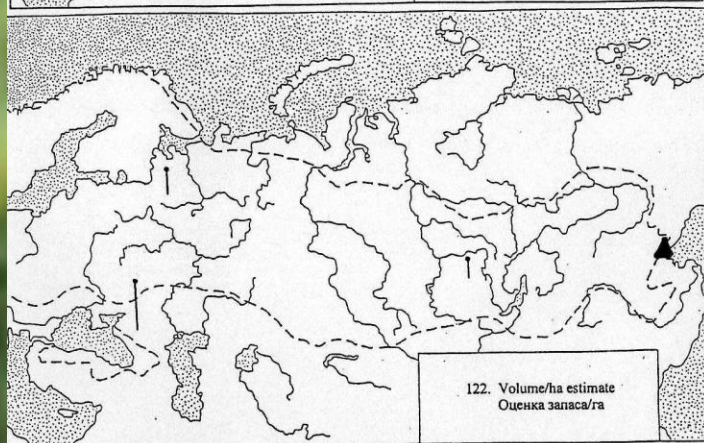
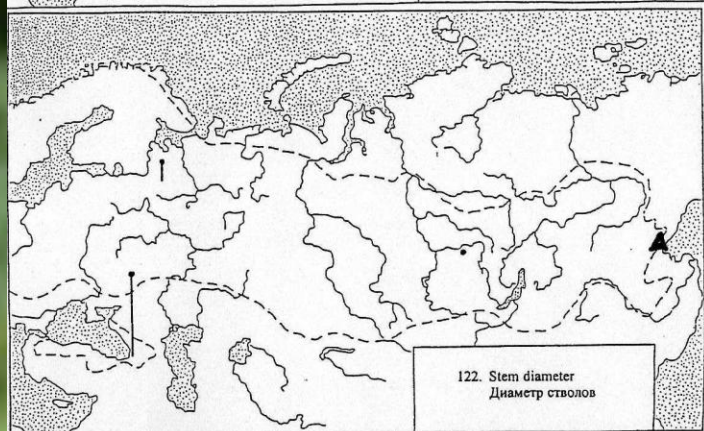
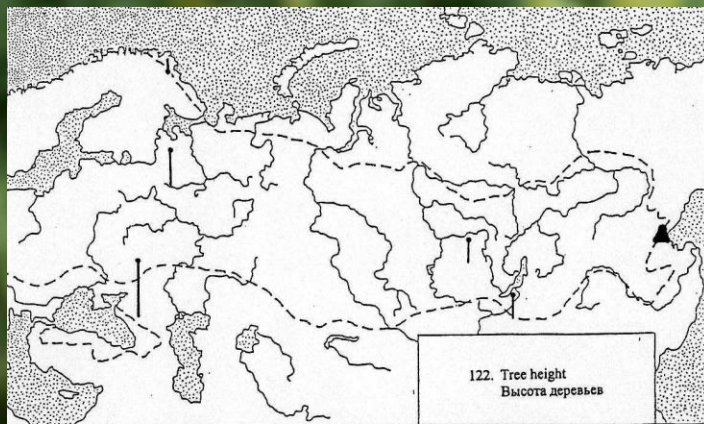


№ 86. 56°50'N, 82°20'E zone I III
Новосибирск Prov., Suzun For. Distr., Russia

Survival and growth parameters low on western sites but improve to good ones in central regions and east of the Volga. Stems decidedly crooked.

№ 86. 56° 50' N, 82° 20' E регион I III
Новосибирская обл., Сузунский лесхоз, Россия

Пониженные показатели сохранности и роста в западных пунктах, увеличиваются до хороших в центральных и заволжских пунктах. Выражена кривоствольность деревьев.

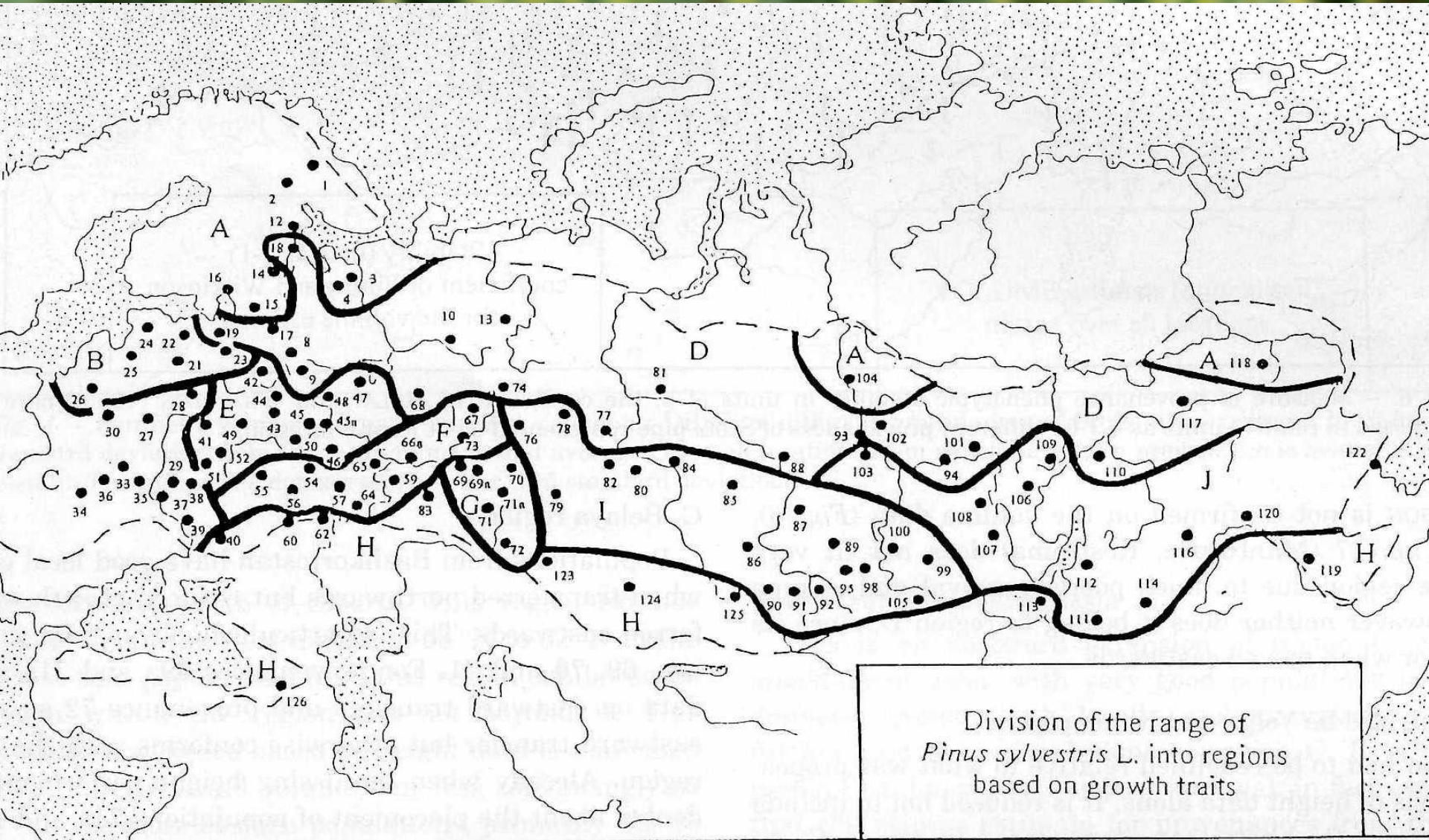


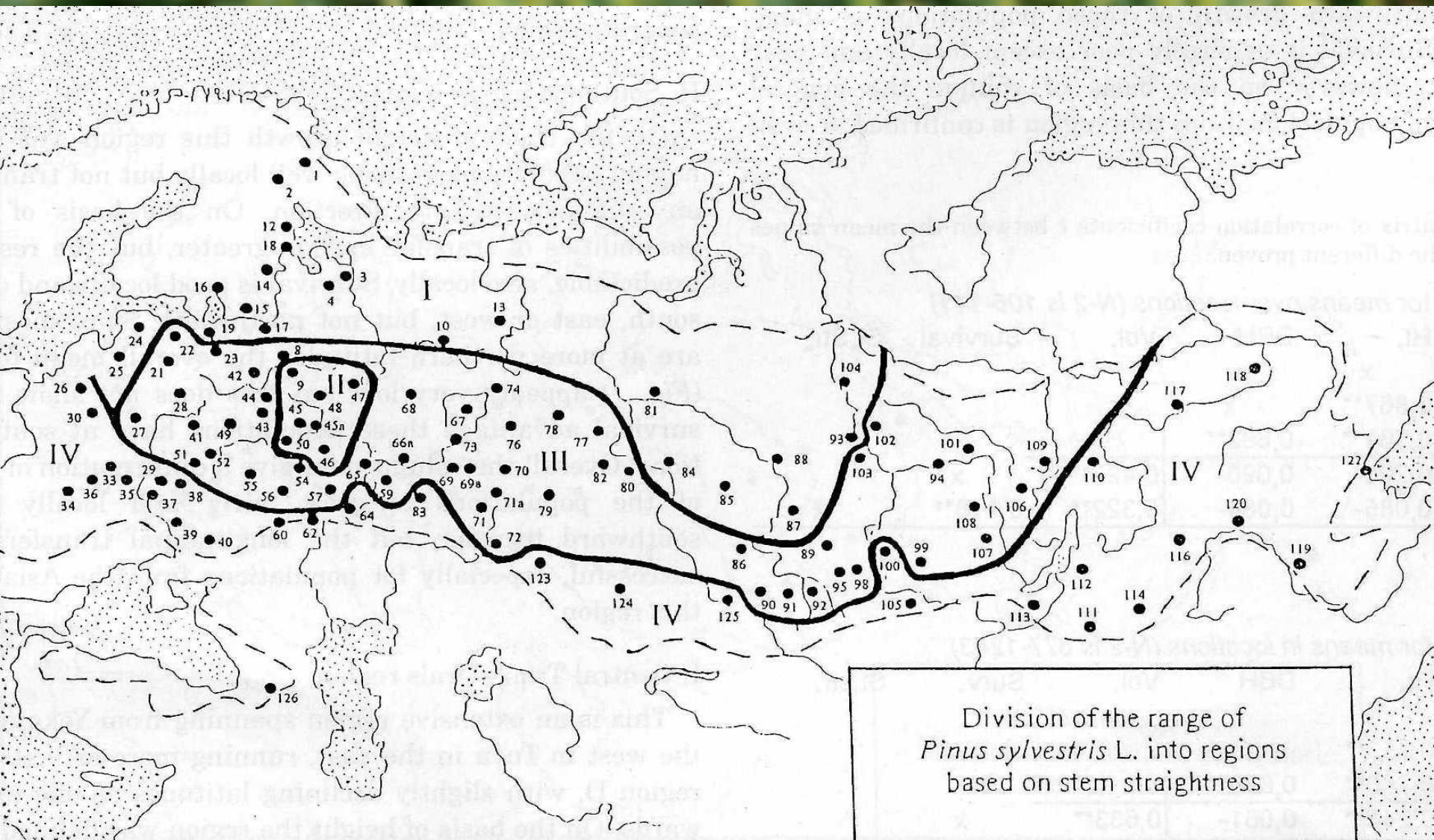
№ 122. 56°30'N, 138°00'E zone J IV
Khabarovsk region Ayan For. Distr., Russia

Survival everywhere poor except on the site near lake Baikal. Growth very poor everywhere.
Stem straightness medium.

№ 122. 56° 30' N, 138° 00' E регион J IV
Хабаровский край, Аянский лесхоз, Россия

Сохранность везде низкая, кроме опыта в районе Байкала. Рост очень слабый. Прямизна
стволов средняя.





Division of the range of *Pinus sylvestris* L. into regions based on stem straightness

Thank you for your attention!