

Report of a Pest Risk Assessment

This summary presents the main features of a pest risk assessment which has been conducted on the pest, according to EPPO Standard PP 5/3(1) Pest Risk Assessment Scheme.

Pest:	<i>Lepidosaphes ussuriensis</i>
PRA area:	Non-Asian part of the EPPO region
Assessor:	EPPO Panel on Quarantine Pests for Forestry
Date:	April, 2003

1. INITIATION

1.1 Reason for doing PRA:	Study of the risk of forest pests occurring on the territory of the former USSR for the western part of the EPPO region
1.2. Taxonomic position of pest:	<i>Lepidosaphes ussuriensis</i> Borchsenius (Homoptera: Diaspididae)

2. PROBABILITY OF INTRODUCTION

2.1 Entry

2.1.1 Geographical distribution:	Originates in the Far East and/or Japan EPPO region: Russia (South of the Far East and Sakhalin) Europe: Absent Asia: Northern China, Russia (South of the Far East and Sakhalin), Japan (Hokkaido, Honshu) EU: absent. North America: Absent Central America & Caribbean: Absent South America: Absent Oceania: Absent
2.1.2 Major host plants:	<i>L. ussuriensis</i> is a polyphagous pest, damaging <i>Ulmus</i> , <i>Alnus</i> , <i>Malus</i> , <i>Populus</i> , <i>Betula</i> , <i>Euonymus</i> , <i>Syringa</i> and many other woody plants.

2.1.3 Which pathway(s) is the pest likely to be introduced on: *L. ussuriensis* is associated with plants where it spend all its life cycle. It spreads mainly with plants for planting. Natural active spread to very short distances on branches and leaves is possible with neonate larvae.
In decreasing order of risk, the main pathways for *L. ussuriensis* are:

1. Plants for planting including bonsai
2. Cut branches

2.2 Establishment

2.2.1 Crops at risk in the PRA area: *Ulmus, Alnus, Malus, Populus, Betula, Euonymus, Syringa* and other woody plants. The biggest risk exists for city plantations, ornamental and fruit trees and shrubs.

2.2.2 Climatic similarity of present distribution with PRA area (or parts thereof): The Central and the Southern parts of the EPPO region have similar climatic conditions with the area of origin and present distribution of the pest.

2.2.3 Aspects of the pest's biology that would favour establishment: The pest is polyphagous and genetically adaptable.

2.2.4 Characteristics (other than climatic) of the PRA area that would favour establishment: Host plants are widely distributed within the PRA area. Suitable ecological niches are available throughout the PRA area.

2.2.5 Which part of the PRA area is the endangered area: The endangered part of the PRA area covers most of central and southern regions of the EPPO territory.

3. ECONOMIC IMPACT ASSESSMENT

3.1 Describe damage to potential hosts in PRA area: *L. ussuriensis* is mainly a pest of branches. It attacks both stressed and healthy trees of different ages leading to the death of branches and the fall of leaves of forest, ornamental and fruit trees. Its damage also leads to a considerable decrease of ornamental value of trees.

3.2 How much economic impact does the pest have in its present distribution: *L. ussuriensis* is an important pest of many forest, ornamental and deciduous fruit trees in the region of its present distribution. Its effects can also be environmental (in stressing natural forests) and social (in stressing and killing trees in towns). Damaging branches of ornamental plants, *L. ussuriensis* disturbs city ecology and city environment.

3.3 How much economic impact would the pest have in the PRA area: Considering the similarity of ecological conditions, the damage in the endangered part of the PRA area could be similar to that in the present area of the pest.

4. CONCLUSIONS OF PRA

4.1 Summarize the major factors that influence the acceptability of the risk from this pest:

This pest

- comes from an area with similar climatic conditions to those of the PRA area and could easily establish throughout a large part of it;
- can cause serious economic damage there;
- is the pest of many hardwoods, ornamental and fruit trees which are important in the PRA area;
- can cause also serious environmental and social damage.

4.2 Estimate the probability of entry:

high with plants for planting (including bonsai), medium for cut branches

4.3 Estimate the probability of establishment:

high with plants for planting (including bonsai), low with cut branches

4.4 Estimate the potential economic impact:

medium

4.5 Degree of uncertainty

There is little uncertainty in this assessment

5. OVERALL CONCLUSIONS OF THE ASSESSOR

The endangered part of the PRA area covers most of central and southern regions of the EPPO territory. The pest entry with plants for planting and establishment have a high probability. Its impact within the endangered area would be the direct damage to plantations of *Ulmus*, *Alnus*, *Malus*, *Populus*, *Betula*, *Euonymus*, *Syringa* and many other forest, fruit and ornamental trees and shrubs, environmental damage to natural forests, and social damage to trees in towns. *L. ussuriensis* is of limited distribution in the EPPO region (only in the Far East of Russia). Phytosanitary measures could prevent its introduction into the endangered area.

L. ussuriensis is proposed for the A2 list.