

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>Strobilomyia viaria</i>
PRA area:	Non-Asian part of the EPPO region
Assessor:	EPPO Panel on Quarantine Pests for Forestry
Date:	September, 2004

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: *Strobilomyia viaria* Hockett (Diptera: Anthomyiidae)

2. PROBABILITY OF INTRODUCTION

2.1 Entry

2.1.1 Geographical distribution: **EPPO region:** Russia (Transbaikalia, North-Eastern Siberia, Southern Siberia, North Far East).
Europe: Absent
Asia: China (North-Eastern and Central), South Korea, Russia (Transbaikalia, North-Eastern Siberia, Southern Siberia, North Far East).
EU: Absent.
North America: Canada and USA
Central America & Caribbean: Absent
South America: Absent
Oceania: Absent
Note: the pest is considered as a Trans-Beryngian species

2.1.2 Major host plants: *S. viaria* attacks cones of larch species: *Larix gmelini*, *L. olgensis*, *L. principis-rupprechti*, and *L. cajanderi* in Asia, and *L. laricina* (tamarack) in North America.

2.1.3 Which pathway(s) is the pest likely to be introduced on: Adults of *S. viaria* can fly over rather long distances to colonize new stands. Eggs and larvae are unlikely to be disseminated because they occur on immature cones. However, pupae can be disseminated with soil of potted larch seedlings.
The only pathway identified for *S. viaria* at the PRA is:
1. Soil accompanying plants

2.2 Establishment

2.2.1 Crops at risk in the PRA area:

Different *Larix* species. Seed orchards in European countries can be endangered. The natural reforestation can also be disturbed.

2.2.2 Climatic similarity of present distribution with PRA area (or parts thereof):

All parts of the EPPO region producing larch seeds or having larch forests and plantations (including mountains) have similar climatic conditions with the area of present distribution of the pest.

2.2.3 Aspects of the pest's biology that would favour establishment:

The pest is genetically adaptable and very difficult to eradicate. A low populations of the pest are very likely to be established.

2.2.4 Characteristics (other than climatic) of the PRA area that would favour establishment:

Host plants are rather 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 the EPPO territory including mountain areas

3. ECONOMIC IMPACT ASSESSMENT

3.1 Describe damage to potential hosts in PRA area:

S. viaria attacks larch cones and destroy seeds inside them.

3.2 How much economic impact does the pest have in its present distribution:

S. viaria is a major seed pest of larch cones in northern China where it often dominates the cone fly complex, accounting for 40 to 70% of the total damage. The impact is severely hindering the seed crops expected in seed orchards of Heilongjiang. In other areas of the Far East, cone damage was for a long time confused with that of other cone flies but recent surveys showed that *S. viaria* is the dominant species of larch cone fly in Kamchatka where it attacks 25 - 40 % of the cones. Cone damage was lower in Canada. In China and Kamchatka, a larva destroys up to 20 seeds per cone, i.e. 60 to 100% of the seed yield depending on the cone size. As soon as 2–3 larvae, possibly belonging to different species, are observed in a cone, the whole seed content is destroyed. In Canada, the mean number of scales eaten per cone was 8.4-10.7 in average.

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 larch seeds, which are important in the PRA area.

4.2 Estimate the probability of entry: Movement of soil is very low, but once there is movement, the probability of entry is high

4.3 Estimate the probability of establishment: High within a limited area

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 the EPPO territory. The probability of the pest entry is high with soil accompanying plants once there is movement of soil. The probability of the pest establishment is high in larch growing areas. Its impact within the endangered area would be the direct damage to larch seed production and natural reforestation of larch forests. *S. viaria* is of limited distribution in the EPPO region (only in Eastern Russia). Phytosanitary measures could prevent its introduction into the endangered area.

S. viaria is proposed for the A2 list.