Protection of World Forests from Insect Pests: Advances in Research

Papers presented at the XXI IUFRO World Congress 7-12, August 2000, Kuala Lumpur, Malaysia

Editors:

René I. Alfaro: IUFRO 7.03.00 Entomology Coordinator
Keith Day and Scott Salom: Pest problems in planted forests
K.S.S Nair: Management of insect pests in the tropics
Hugh Evans, Andrew Liebhold: Invasive insects and diseases
François Lieutier, Mike Wagner: Mechanisms of tree resistance to insect pests
Kazuyoshi Futai, Kazuo Suzuki: Epidemic factors and global spread of pine wilt

Canadian Volume Coordinator: Michelle Meier, Canadian Forest Service
Table of Contents

1) Pest problems in planted forests (Session 7.03.03)

Moderators: Keith Day, Scott Salom


Page 01

Alfaro, René I., John N. King, Yousry A. El-Kassaby, R. George Brown and Kornelia Lewis. Use of artificial infestations in the selection of sitka spruce genotypes for resistance to the white pine weevil in British Columbia, Canada.

Page 13


Page 19

Straw, N.A. The impact of green spruce aphid (Elatobium abietinum (Walker)) on young and mature spruce plantations.

Page 29

Cobbinah, J.R., M.R. Wagner. Insect problems in plantations in the equatorial rain forests of Africa.

Page 37

2) Invasive insects and diseases (Session 7.03.07)

Moderators: Hugh Evans, Andrew Liebhold


Page 45

Evans, H.F., R.H.A. Baker and A. MacLeod. Evaluating the risk of invasion by potential forest pests.

Page 55

Humble, L.M. Invasive bark and wood-boring beetles in British Columbia, Canada.

Page 69


Page 79


3) Mechanisms of tree resistance to insect pests (Session 7.01.02)
Moderators: Francois Lieutier, Mike Wagner

Clancy, K.M. Biochemical characteristics of douglas-fir trees resistant to damage from the western spruce budworm: patterns from three populations. Page 115


4) Epidemic factors and global spread of pine wilt (Session 7.02.11)
Moderators: Kazuyoshi Futai, Kazuo Suzuki

I Epidemic Factors of Pine Wilt

Togashi, K. Insect vector-nematode relationship and virulence of nematode against host plants. Page 149

Ikeda, T. Wilt disease-induced xylem embolism in trees. Page 157

Yamane, A., R. Iwata. Recent advances in studies on chemical ecology and behavior of the Japanese pine sawyer adult. Page 161


II Global Spreading of Pine Wilt

Kulinich, O.A., P.D. Orlinski. Pathogenicity and possible adaptation of the pinewood nematode, Bursaphelenchus xylophilus, in central European Russia.

Magnusson, C. Strategy of protection of European forests from pinewood nematodes.

Bergdahl, D.R., S. Halik. Pine wilt disease: a potential threat to coniferous forests around the world.

Futai, K. Unsuccessful experience in controlling the pine wilt in Japan.

Webster, J.M. Pinewood nematode: characteristics and hazards of its global impact.

5) Management of insect pests in the tropics (Session 7.03.09)

Moderator: K.S.S. Nair


Nair, K.S.S. Management of the Teak defoliator, Hyblaea puera – current status.

Lapis, E.B. Outbreak of the ambrosia beetle, Platypus sp., in Avicennia marina in the Philippine mangrove forest.

Dey, R.K. Management of the sal heartwood borer, Hoplocerambyx spinicornis in India.

Hutacharern, C. Teak beehole borer, Xyleutes ceramica: ecology and management.