

# II INTERNATIONAL SYMPOSIUM ON KOREAN PINE BIOLOGY AND SILVICULTURE

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## PROGRAM & ABSTRACTS





# ABSTRACTS

## *Note about the content of the abstracts*

The Organizing and Scientific committees have not made any edits to the content of the abstract. The abstracts are, therefore, presented as they were submitted by the authors.

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# APHYLLOPHOROID FUNGI (BASIDIOMYCOTA) ASSOCIATED WITH *PINUS KORAIENSIS* OF THE RUSSIAN FAR EAST

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Aphylophoroid fungi play an important role in forest ecosystems, being the main destroyers of wood. They are able to destroy wood at different stages of its decomposition. Some of the aphylophoroid fungi live on soil and form ectomycorrhiza with tree and shrub species. The pine-broadleaved forests are the most valuable of all the variety of coniferous forests of the Far East. Our work is quite relevant, as there is almost no research on the species diversity of aphylophoroid fungi associated with *Pinus koraiensis*.

For several decades, Lyubarsky L.V. purposefully studied wood-destroying fungi on various forest-forming species in the south of the Russian Far East, including on *P. koraiensis*. The results are presented in the monograph "Wood-destroying fungi of the Far East" (Lyubarsky, Vasilyeva, 1975), where 25 species of aphylophoroid fungi on *P. koraiensis* are listed. In addition, five years ago, V.F. Malysheva and co-authors (2014) carried out considerable work on the study of ectomycorrhizal fungal diversity of *P. koraiensis* in the forests of the Central Sikhote-Alin. They identified 27 species of ectomycorrhizal aphylophoroid fungi associated with *P. koraiensis*.

Our research consisted in viewing literary sources, and herbarium materials (VLA) was studied. In addition, there were own pickings in the pine-broadleaved forests of Primorye Territory (Krasnoarmeiskii district), Khabarovsk Territory (Bolshoi Khekhtsir Reserve), Jewish Autonomous Region (Bastak Reserve). It was found that there are 103 species of aphylophoroid fungi associated with *P. koraiensis* of the Far East of Russia. Most of the identified fungi belong to the group of xylosaprotrophs, destroying wood at different stages of decomposition: deadwood, fallen and dead tree trunks, stumps, twig (*Phlebiella fibrillosa* (Hallenb.) K.H. Larss. et Hjortstam, *Postia sericeomollis* (Romell) Jülich, *Pycnoporellus fulgens* (Fr.) Donk, *Fomitopsis cajanderi* (P. Karst.) Kotl. et Pouzar, *F. pinicola* (Sw.) P. Karst., *F. rosea* (Alb. et Schwein.) P. Karst., *Gloeophyllum odoratum* (Wulfen) Imazeki and others). *Cryptoporus volvatus* (Peck) Shear from dead trunks of *P. koraiensis* is listed in Red Data Books of Primorie, Amur and Sakhalin Regions.

Fungi, causing destruction of living trees, are of particular importance. *Phellinus pini* (Brot.) Pilát is the most dangerous pathogenic fungi on *P. koraiensis*. *Albatrellus ovinus* (Schaeff.) Kotl. et Pouzar, *Ramaria aurea* (Schaeff.) Quél., *R. eumorpha* (P. Karst.) Corner, *R. stricta* (Pers.) Quél., *Piloderma olivaceum* (Parmasto) Hjortstam, *Tomentella botryoides* (Schwein.) Bourdot et Galzin, *Tomentellopsis submollis* (Svrček) Hjortstam and others form mycorrhiza with *P. koraiensis*.

This work contains only preliminary data about biodiversity aphylophoroid fungi in pine-broadleaved forests. This study requires further research, including the need to assess the degree of infestation of *P. koraiensis* by fungi.