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## Pine Research in the Philippines

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The early 1900s marked the beginning of pine research in the Philippines. The first work of Brooks in 1910 resulted in the identification of an essential oil, the oleoresin in *Pinus insularis*. In 1911, Foxworthy presented the taxonomic description of *Pinus insularis* and other gymnosperms. However, no literature on pine research can be found in the next 40 years that followed as a result of World Wars I and II.

Pine research done by Filipinos was first published in the middle of the 1950s. Topics included regeneration, control disease and silviculture. In the 1960s other topics as vegetative propagation, inventory, insect pests, seed and germination were included.

It was more than 10 years before pine research finally intensified in the mid-1970s. In 1976, researchers started to adapt the name *Pinus kesiya* or commonly known as Benguet pine. In 1977, a new disease of Benguet pine was discovered. This involved the yellowing of needles and the pinkish discoloration of the stem. In 1979, other species were introduced, namely, *Pinus caribea*, *Pinus elliottii* and *Pinus oocarpa*.

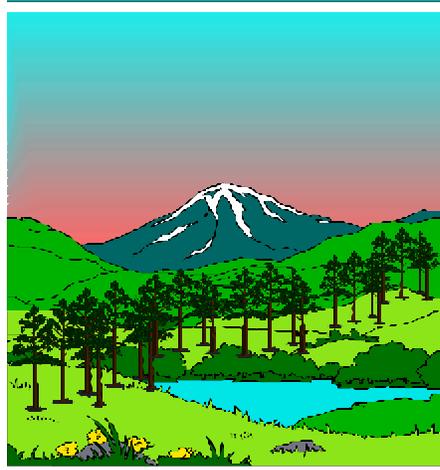
In the same year, the role of pine in the prevention of soil erosion was finally established. These kinds of work extended to the 1980s. Topics covered from the 1970s to the 1990s can be classified into ecology and silviculture, propagation and regeneration, pests and diseases, growth and physiology, provenance

trials, reproductive biology, economic uses and inventory. In addition, local research on pine trees started to be published in international journals in the 1990s.

For areas of interest priority should be given to the two naturalized species in the Philippines, *Pinus kesiya* and *Pinus merkusii*, both of which were introduced from Burma. *Pinus kesiya* or

Benguet pine is found in the Central Cordillera Range, in the Caraballo and Zambales and Mindoro.

Of particular interest is the area where the range of the 2 species overlaps. Perhaps a genetic study on this could possibly result into a discovery of pine species that are pest resistant and, therefore, would result to improved vigor and better lumber quality.





In this case, it can become a source of ideal seeds for reforestation.

Apparently, there has been a report which shows that most of the new records of pest and diseases are associated with the importation of exotic species of pine. Here in Baguio City, there are at least 20 newly-introduced species acquired during the "Pine Trees of the World Project" sponsored by the Department of Tourism. This project aims to articulate the Philippines 2000 vision of a clean and green environment.

Although this project has good intentions, the importation of a new plant species poses a danger to our existing pine trees. It is possible

that these species carry with them some problems that will affect our pines.

Therefore, there should be continued monitoring of the growth of these species for the possible occurrence of pests and diseases. Likewise, strict measures should be implemented to monitor the importation of new species for the control of pests and diseases.

Currently, local research efforts on pine trees come from the Bureau of Forestry, Department of Environment and Natural Resources, Forest Institute and several other institutions. However, most researches are not published in journals of wide circulation.

Some of the newly-introduced pine species at Burnham Park, Baguio City through the "Pine Trees of the World" project (based on the DOT-CAR inventory done 14 July 1997).

<u>Scientific Name</u>	<u>Common Name and Number</u>
• <i>Pinus attenuata</i>	Knobcone pine 1
• <i>P. aristata</i>	Bristlecone pine 1
• <i>P. nigra</i>	Austrian pine 22
• <i>P. contorta</i>	Lodgepole pine 3
• <i>P. coulteri</i>	Coulter pine 1
• <i>P. flexilis</i>	Limber pine (Canada) 1
• <i>P. jeffreyi</i>	Jeffrey pine (China) 1
• <i>P. lambertiana</i>	Sugar pine (Germany) 1
• <i>P. monticola</i>	Western white pine (France) 3
• <i>P. mugovar mughus</i>	Mugo pine (Israel) 29
• <i>P. ponderosa</i>	Ponderosa pine (Italy) 4
• <i>P. radiata</i>	Radiata pine (Japan) 1
• <i>P. rigida</i>	Pitch pine (Netherlands) 27
• <i>P. sabiniana</i>	Digger pine (Portugal) 1
• <i>P. strobiformis</i>	Southwestern white pine (U.K.) 21
• <i>P. strobus</i>	Eastern white pine (U.S.) 25
• <i>P. sylvestris</i>	Scots pine 28
• <i>P. thumbergiana</i>	Japanese black pine 18
• <i>P. virginiana</i>	Virginia pine 28
• <i>P. wallichiana</i>	Himalayan pine 23
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\*Prepared by Geneva Simplina\*



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The views expressed herein are those of the author and do not necessarily reflect those of the CSC.

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