

# Foothills Model Forest starts biodiversity project

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Foothills Model Forest is helping set up an exciting new program to monitor biodiversity in the forests in Alberta.

"Biodiversity is the variety of living things," said Daniel Farr, forest ecologist for Foothills Model Forest, which is part of the project.

"Biodiversity can be observed at three different levels. The first is the variety among genes and what makes us different. The second is the variety among different species and the third is the variety of all the different types of ecosystems."

Farr added that people rely on biodiversity for many goods and services that people derive from the earth.

"For example, the forestry industry relies on the forest, specifically certain tree species, to give lumber and pulp. Those tree species rely on other species and so on," said Farr.

"Everything is connected to everything else. That includes humans as well."

The Foothills Model Forest has been developing tools to help understand forest biodiversity and this monitoring system is a way to apply that knowledge.

"The Canada Forest Service has also directed all eleven Canadian Model Forests to develop a monitoring systems," said Farr.

This monitoring system, which is still in its pilot period, will take decades to complete.

This is the only way to really understand how the forests have evolved as well as a good mechanism for actually obtaining a good record of change.

"Forests are always changing. We need to know the details of those changes," said Farr.

"We are developing a system for taking measurements both on the ground and from

the air. We measure the forest and its species."

In the air, 'photos' are taken. Those 'photos' can determine which tree species are present, the relative abundance of the different species and, to some degree, tree health.

On the ground, researchers can actually count species like birds, insects and plants.

Right now there are 10 researchers doing work on the project. This is seasonal work and measurements will be taken between June 1 and the end of August.

"This summer we are developing the system. We have not actually started the monitoring," said Farr.

"The Model Forest is helping through funds for the development of the project but over the long term the program would need broad financial support from both industry and the Government of Alberta."

The pilot project is using

the southern half of the Foothills Model Forest area between Robb and Hinton. The same project is taking place in Lac La Biche. The research done by the two projects is intended to be used throughout Alberta, not just in the Foothills Model Forest.

"The program is intended to be applied all over Alberta. The value of information on biodiversity inside the Foothills Model Forest

will be stronger with information on changes outside the Foothills Model Forest, as well," said Farr. "It's hard to understand how significant the changes are here if we do not know about changes in other places."

Other provinces, including Saskatchewan and Ontario, are also working to develop biodiversity monitoring systems.

The biodiversity monitoring pilot project has a num-

ber of different sponsors in addition to the Foothills Model Forest. The Alberta Science and Research Authority, the Alberta Conservation Association, Manning Diversified Trust Fund, Alberta Environment, the Canadian Forest Service, Alberta Research Council and several forest companies including Weldwood of Canada Ltd. are also involved in the biodiversity research project.



A researcher from the University of Lethbridge takes light measurements from a white panel. This equipment is part of the way measurements are taken on biodiversity.



Part of the biodiversity project, which has just started this year, is to go up into the air and take special photos of the forest area in order to find out what kind of biodiversity is in the forests.