

A sampling of old-growth forests in Canada

Old-growth forests are located throughout Canada's forest landscapes. Canada's National Forest Inventory (NFI) maintains a network of permanent forest monitoring plots at randomly selected points, and some of these happen to be in very old forest stands.



Montane Cordillera
British Columbia



Taiga Plains
Northwest Territories



Boreal Shield
Ontario



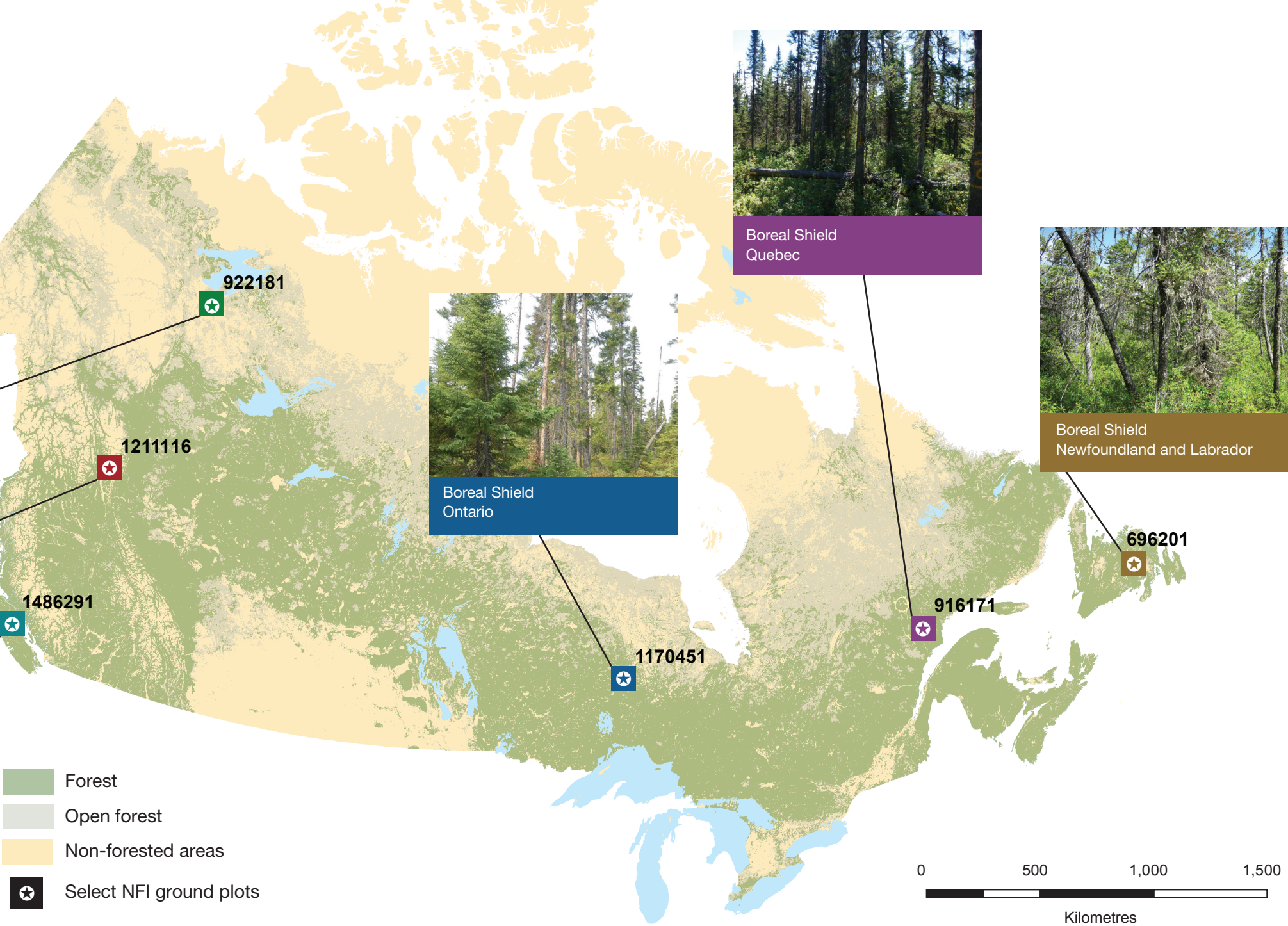
Boreal Shield
Quebec



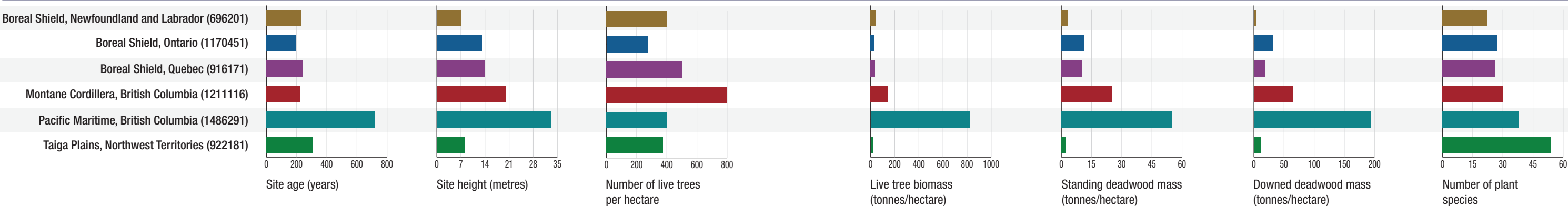
Boreal Shield
Newfoundland and Labrador



Pacific Maritime
British Columbia



Among old-growth forests...



How old are Canada's forests?

Twelve thousand years ago, ice sheets covered most of what is now Canada. Canada's forests have undergone countless cycles of growth, disturbance and regrowth since then, dynamically adapting to changing conditions. Where natural disturbances occur frequently, such as in fire-prone landscapes, these cycles repeat more frequently and older stands are rare, even in the absence of human disturbance. In areas less exposed to large forest disturbances like on islands and along lakeshores, where water acts as a fuel break, forests may go centuries without being disturbed.

What is “old-growth”?

A forest can become old-growth if enough time passes and if major disturbances (e.g., wildfire or clear-cutting) do not cause the death of the trees within it. Old-growth forests are not stable or static. They continue to evolve through small-scale disturbances such as the death of individual trees.

Different forest types produce different kinds of old-growth. Old-growth forests in Newfoundland and Labrador look quite different from those in British Columbia. In general, old-growth forests are home to a range of trees including older

– but not always bigger – trees, trees that are able to grow in the shade of other trees, standing deadwood (snags), and downed deadwood. Old-growth forests also have a unique and complex forest structure. For example, trees are of different heights, and the ground is dotted with pits and mounds because of uprooted trees. All these old-growth characteristics provide a diversity of habitat for many plants and animals.

Old-growth forests can store vast amounts of carbon in the wood and in the soil. However, because older trees don't grow as fast as they did when they were young, they have a limited ability to remove additional carbon from the atmosphere through photosynthesis. Some old forests can even release more carbon in the atmosphere from decaying plant material than they are able to uptake through vegetation growth, which makes them carbon sources.

Many of these characteristics are found in forests that have never been harvested and can persist for hundreds or even thousands of years if no major disturbance occurs. Some of these characteristics can also appear in previously harvested forests, but this recovery can take hundreds of years, depending on the forest type.

Forest area by stand age class

