

Good Intentions Gone Bad

A slow release bomb that will devastate our forests is exploding in the West Kootenay and Boundary Regions of B.C.

Summary

Black Locust (*Robinia pseudoacacia*) trees were introduced to the Trail B.C. area to stabilize steep banks that had been denuded by emissions from the local smelter in the past. These trees have done well in West Kootenay and Boundary, so well that they are endangering local forests and biodiversity. Black Locust reproduce primarily by cloning, once a tree reaches about 4 years of age it can start to send out hundreds of shoots/clones to a radius of about 30 metres. Then these clones, can in 4 years, do the same thing. Growth is exponential. It can quickly spread over large areas and shade the ground so that it is difficult for local plants to get enough sunlight to regenerate. Also the Black Locust is a member of the pea family and it fixes nitrogen in the soil. Local plants are adapted to quite barren soil (low nitrogen) so don't regenerate efficiently in richer soils, whereas weeds do well. Other concerns are, that it is suspected of allelopathy (may inhibit the growth of other plants) and could block historical successional trajectories. It is a species that unfortunately will likely flourish with climate change and rising temperatures.

The Governments of BC have essentially ignored the Black Locust invasion for the past 70+ years. There is no up to date account of the distribution of this species and control has been very limited. The current government assumption is that Black Locust is an early successional species and that other local species will succeed it, and that Black Locust requires full sun and will only thrive at forest edges. These assumptions are incorrect and action must be undertaken to halt the current Black Locust invasion.

The BC Government must declare Black Locust a High Priority Invasive Species and action must be taken to control this TREE KILLER. (a term used to describe Black Locust by TreeCanada.ca)

<https://treecanada.ca/resources/tree-killers/black-locust/>

References

USDA and USFS

<https://www.fs.fed.us/database/feis/plants/tree/robpse/all.html#Successional%20status>

Ontario Invasive Plants

Ontarioinvasiveplants.ca Black Locust pg. 2

Impact in West Kootenay and Boundary Regions

A. Black Locust trees were introduced to this area in the 1950's, or earlier. They were planted to control erosion of sulphur dioxide denuded, steep slopes around the Trail smelter. The expected life span of Black Locust is considered to be 75 to 90 years, thus if Black Locust forms a successional forest its successor should now be in evidence. Where is the successor forest species? A successor species is not evident. Black Locust is forming a permanent monoculture in West Kootenay and Boundary. They are not a successional species in this area.

B. Black Locust was thought to require full sun so was expected to only occupy forest edges. Unfortunately riparian areas, open forest, roads, cut blocks and fire damaged areas offer enough sun for this species to proliferate. A mature Black Locust can place clones into partially shaded locations and support it's clones while they develop.



Black Locust (still with green leaves, native species have already dropped their leaves. November 2021) invading mixed forest at Km 1 on Bear Creek FSR. A mature Black Locust is at right. Black Locust extend to Bear Creek (Less than 100 metres from here). It also has invaded the Cottonwood dominated riparian zone of Bear Creek for 1 km plus to the Columbia River and upstream from this photo an undetermined distance.



Black Locust (no green leaves yet, native trees are in leaf, April 2021) invading mixed forest adjacent to Birchwood Drive in Waneta Village.

Conclusion

Black Locust infestation is extensive, especially near towns and cities in the West Kootenay and Boundary Regions. Two readily accessible examples of Black Locust invasion of open forests are shown above. These areas will probably soon become monocultures of Black Locust. Much of the south facing to west facing slopes in this area have open forests and may readily become monocultures of Black Locust also. Chances of Black Locust forests being merely successional in the subject area are not good. If there is a successional forest it is not going to be composed of native species because of the nitrogen rich soils created by Black Locust.

Black Locust is a species that unfortunately will likely flourish with climate change and rising temperatures. Healthy ecosystems can resist climate change much more effectively than damaged ecosystems can. Now is the time to halt the destruction of ecosystems by Black Locust.

The BC Government must take direct and immediate action to define the scope of Black Locust infestation and to stop the further destruction of local forests by Black Locust trees. This will probably also require taking steps to require land holders to be responsible for control of plants on their respective properties.