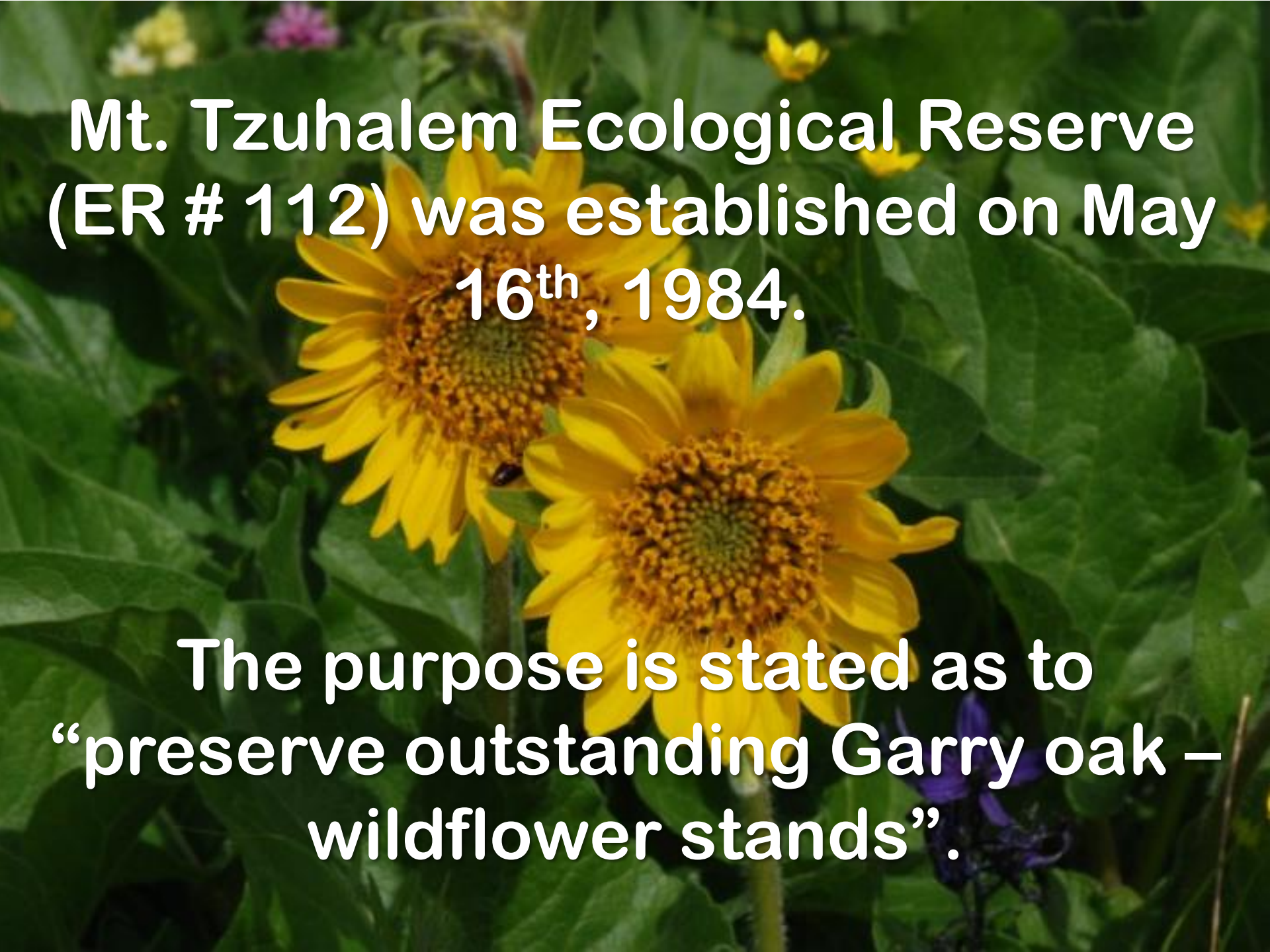




Retaining the Flower Meadows: Douglas-fir Removal at Mount Tzuhalem Ecological Reserve

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Polster Environmental Services Ltd.



Mt. Tzuhalem Ecological Reserve
(ER # 112) was established on May
16th, 1984.

The purpose is stated as to
“preserve outstanding Garry oak –
wildflower stands”.

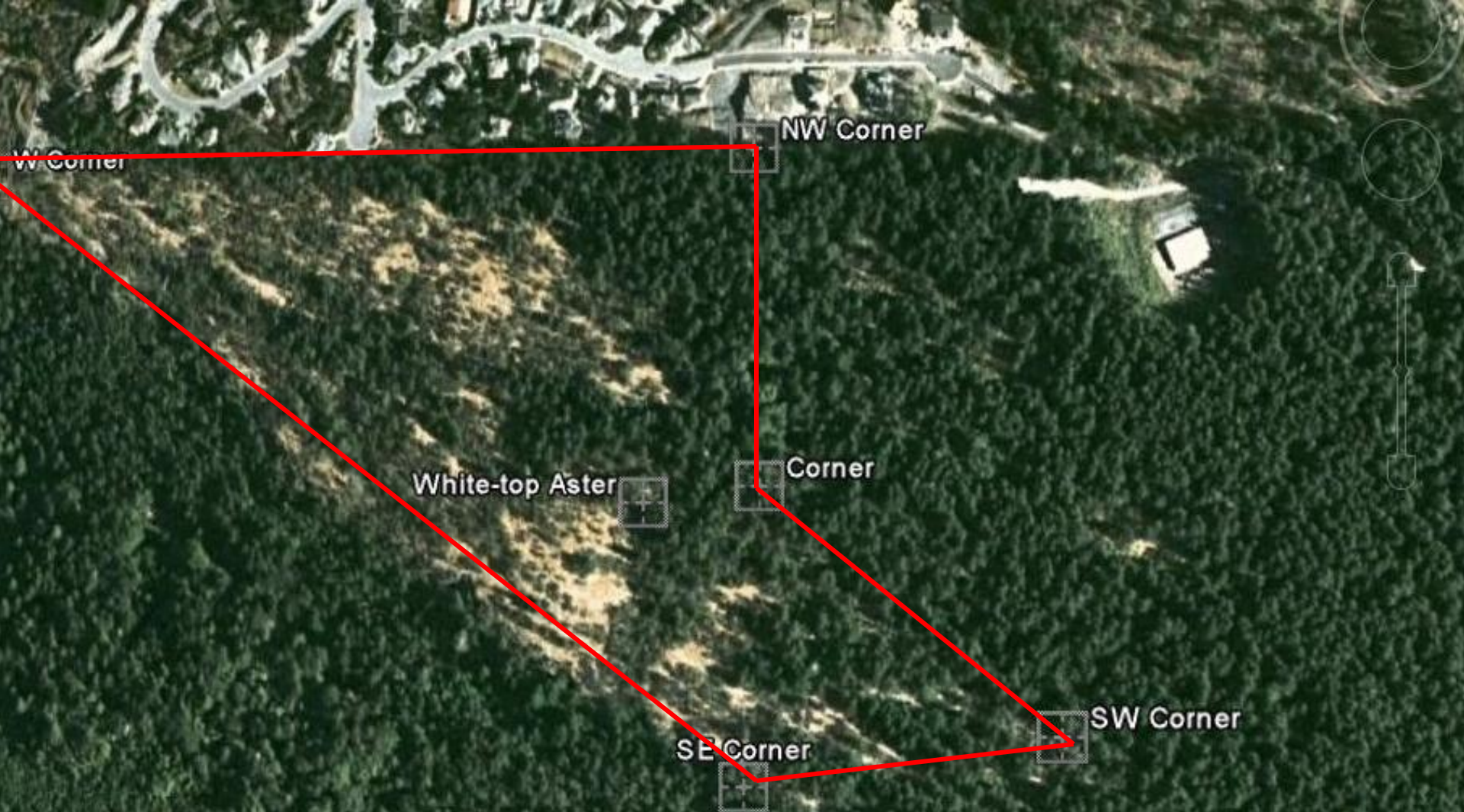


The reserve is also home to 10 listed species – 3 blue and 7 red, including the Yellow Montane Violet (*Viola praemorsa*).

White-top Aster

Sericocarpus rigidus Lindl.

Red Listed, Special Concern

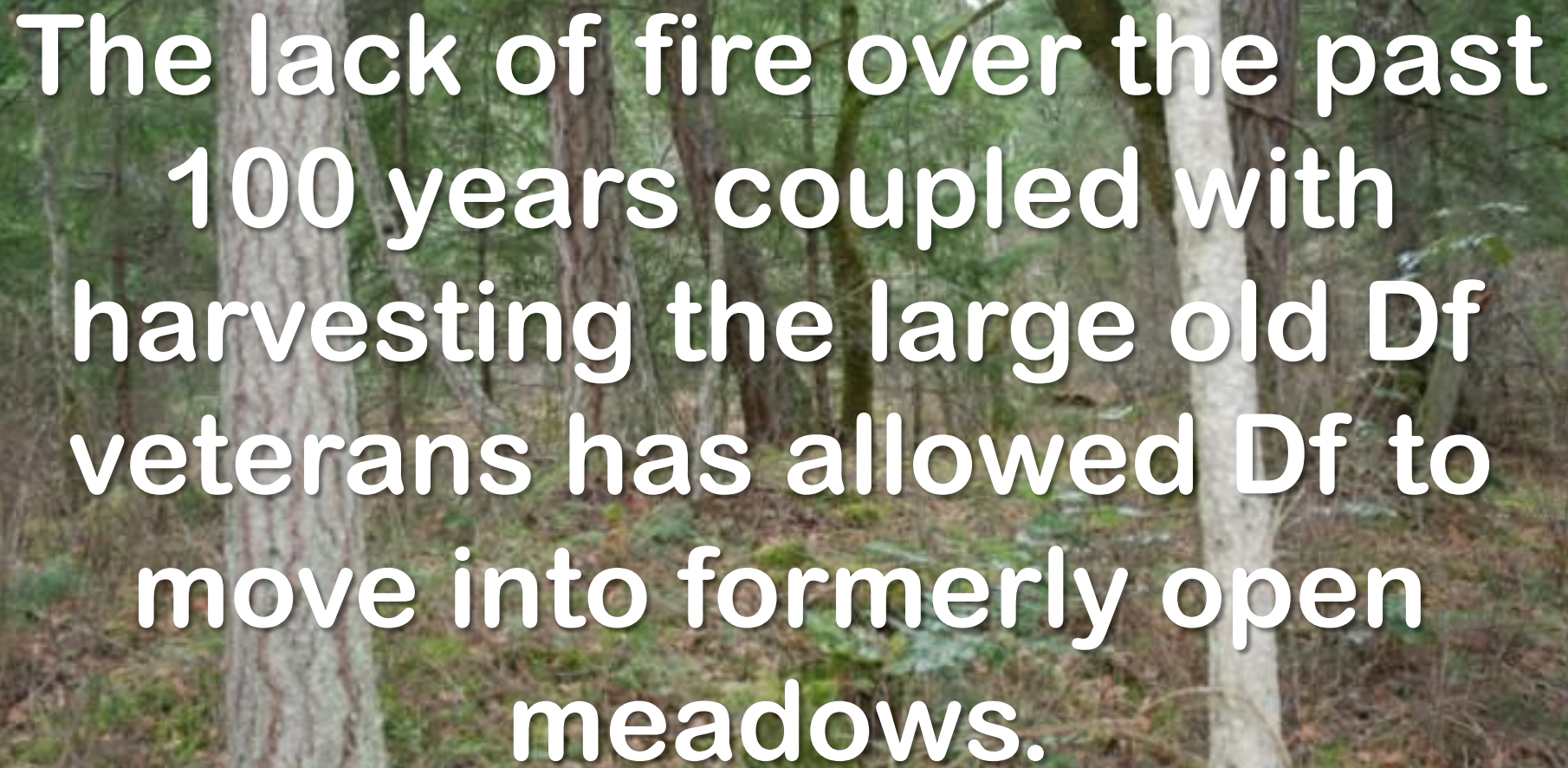


Mount Tzuhalem Ecological Reserve



White-top Aster
Sericocarpus rigidus

99 3 2007

A photograph of a forest interior. Several tall, slender tree trunks are visible, some with light-colored bark and others with darker, more textured bark. The ground is covered in a thick layer of brown, fallen leaves and green ferns. The background is filled with more trees and foliage, creating a dense, green canopy. The lighting is soft and diffused, typical of a forest setting.

The lack of fire over the past
100 years coupled with
harvesting the large old Df
veterans has allowed Df to
move into formerly open
meadows.



As the Douglas-fir trees move
in, they displace the
'outstanding' flower meadows

A photograph of a forest. In the foreground, there is a fallen tree trunk and some dry, brownish vegetation. The background is filled with tall, green evergreen trees. The text is overlaid on the lower half of the image.

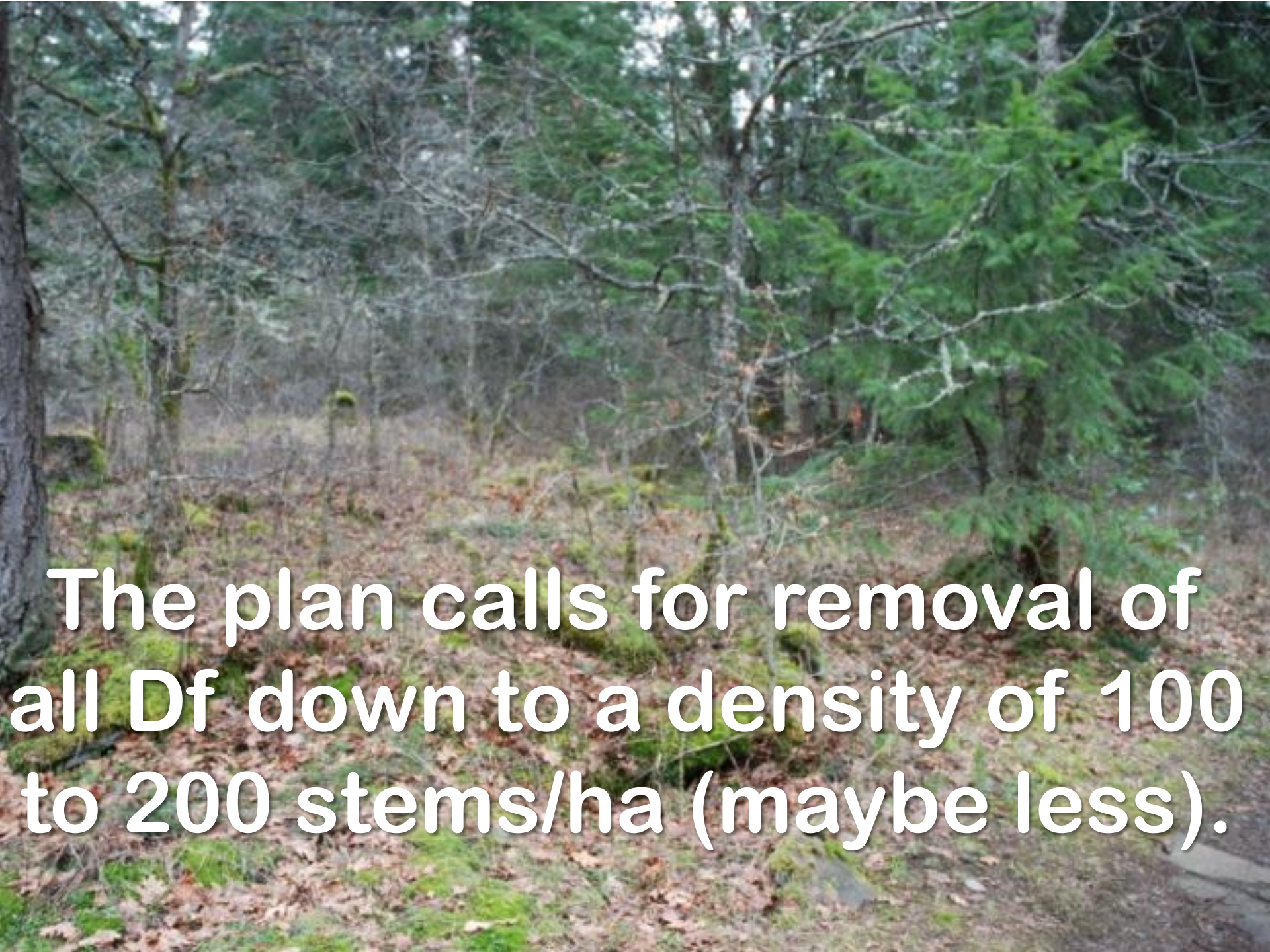
In early 2010, after years of talking, a decision was taken to do something about this encroachment.

MANAGEMENT OF FOREST ENCROACHMENT MT. TZUHALEM ECOLOGICAL RESERVE

PREPARED FOR:

**Ministry of Environment
Vancouver Island Region
Parks and Protected Areas**

**A management plan was
prepared.**



The plan calls for removal of all Df down to a density of 100 to 200 stems/ha (maybe less).



**This density comes from a
count of the old stumps**

A photograph of a forest. In the background, there is a dense stand of tall, dark green evergreen trees. In the foreground and middle ground, there are many bare, light-colored deciduous trees with intricate branch structures. The ground is covered with dry, brown leaves and some green grass. The sky is overcast and grey.

The remaining Df are to be
limbed as high as practical to
minimize the shade on the
understory.




**White-top Aster likes the
partial shade provided by old
growth Df.**



Lifting the canopy will provide
this partial shade that White-
top Aster likes.

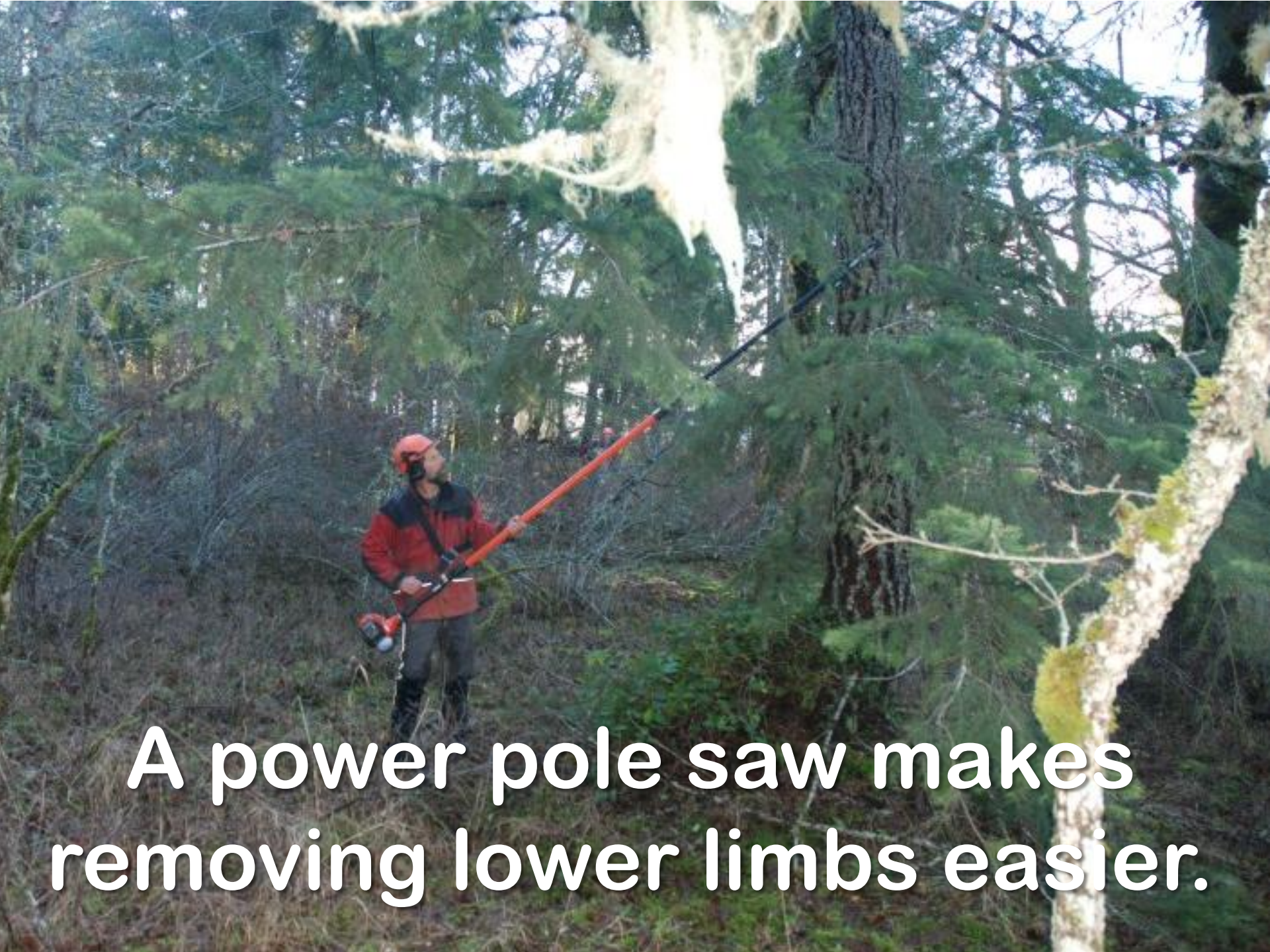
30 11 2010

A photograph of a tree trunk in a forest. The tree has a dark, textured bark. A horizontal section of the bark has been removed, revealing a lighter, yellowish-brown inner layer. The surrounding forest floor is covered with dry leaves, twigs, and patches of green moss. Other trees are visible in the background.

Other trees are girdled to
reduce the amount of
biomass on the forest floor.

A close-up photograph of a tree trunk. The bark is covered in patches of green moss and lichen. A large, irregular, reddish-brown wound is visible, running horizontally across the trunk. The wound appears to be a deep cut or a large hole, possibly from a girdling technique. The background is dark and out of focus, showing some green foliage.

A variety of girdling
techniques are being tested.




**A power pole saw makes
removing lower limbs easier.**



There are a lot of new Df in the
reserve...



...so we expect the treatments
to extend over a number of
years.



We will be monitoring the
ecological effects of our
actions, refining the
treatments as we go.

Questions ???

