

# Ground Hemlock

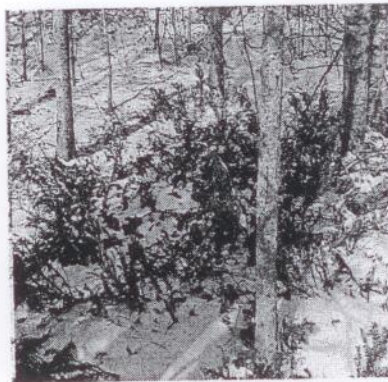
**What is it?**

**Where and How Fast does it grow?**

**Harvesting Guidelines**

**Quiz**

**Answers to Quiz**



# Ground Hemlock

## What is Ground Hemlock?

Ground hemlock (*Taxus canadensis*), also known as Canada yew or eastern yew, is a low-spreading and relatively slow-growing shrub. Unlike most other native evergreens, it is not used for timber or pulp. The biology and general ecology of ground hemlock has not been extensively studied ...until fairly recently, that is!

## Why is there interest in ground hemlock now?

Since the 1960s, the U.S. National Cancer Institute (NCI) has maintained a large study in which plants from all over the world, including hundreds of native forest plants from all over North America, are sampled in an effort to find natural compound(s) that could be used in their fight against cancer. One of the promising substances the NCI found was paclitaxil (Taxol®). Found in the bark of the Pacific yew tree (a big west-coast cousin of ground hemlock), this 'chemical gem' was proven to be very effective against ovarian cancer as well as other diseases. However, it was not until some 20 years later that paclitaxil and some closely related compounds in the family of substances called 'taxanes' were found to also occur in our eastern yew. Taxol® (and related taxanes) show promise against more than 20 cancer and non-cancer diseases.

## How common is it?

Eastern yew can be found throughout Atlantic Canada and in much of Quebec, but often in small isolated pockets. Although yew can comprise a significant amount of the total ground cover in some areas, seldom do you find 'stands' or, perhaps more accurately, 'carpets' of it, except perhaps in P.E.I. There are no inventories of 'growing stock,' so no one knows much yew exists in the forests. While some work is ongoing to answer this question, detailed information is not readily available.

## Where does it grow?

Ground hemlock typically grows in the understory of mature and semi-mature forests. It can be found under most canopy types; hardwoods, softwoods, and mixed woods. The fact that it usually is found under a closed canopy does not mean that it will not grow in the open – a common misconception, resulting from the observation that often after a stand is harvested, the yew needles 'burn,' or turn brown. In fact, yew will grow more vigorously in the open than under shade (ground hemlock makes a NICE hedge!).

## How fast does it grow?

Very little has been published on the growth of eastern yew other than to describe it as a spreading, slow-growing shrub.

## **Is ground hemlock a short-term goldmine or a long-term renewable resource?**

Harvesting ground hemlock has the potential to become an extremely valuable 'renewable' natural resource for Atlantic Canada, but only if it is managed responsibly. Sustainable harvesting guidelines have been developed jointly between Canadian Forest Service - Atlantic Forestry Centre and the Prince Edward Island Department of Agriculture and Forestry.

## **Selling Timber**

Selling standing timber to a local contractor or mill is fairly common event for many island wood lot owners.

However, in recent years many land owners have come to realize that their woodland may offer more than timber, pulpwood and fuel.

## **How Do I Know If I Have Ground Hemlock Growing On My Land?**

Individual ground hemlock plants can be found in many island woodlots. Often it occurs in sizes ranging from small patches covering a few square meters to large blocks covering several hectares.

Ground hemlock is commonly found in rich, moist woodlands with a mixture of hardwood and softwoods.

## **How Do Buyers Determine If There Is Enough Ground Hemlock To Collect?**

There are no hard and fast rules about whether or not a ground hemlock patch has commercial value. Most buyers use several factors to determine if the site is worthwhile.

The most common assessment factors used are:

- \* The size and plant density of the potential harvest area
- \* Size and health of the plants
- \* The working conditions and terrain
- \* The proximity of the harvest site to access roads where trucks can collect several tons of material for shipment to market

## **How Are Landowners Usually Paid?**

It is the responsibility of land owners to negotiate their own deal with the buyer, but there are a few rules of thumb to follow. For instance, you could negotiate a price per pound or it may be possible to negotiate a flat rate for the sale of all of the available material. As well, you may ask for all the payment up front before work begins, or allow for partial payment now and full payment when the harvest has been completed.

# IDENTIFYING GROUND HEMLOCK.

## A Quick and Simple Guide

Ground Hemlock (*Taxus canadensis*) is a small evergreen shrub from the Yew Family. It grows by spreading out across the forest floor and is usually found growing in mixedwood and hardwood stands and areas along streams and wet lands.

### Key Identification Factors:

#### Foliage:

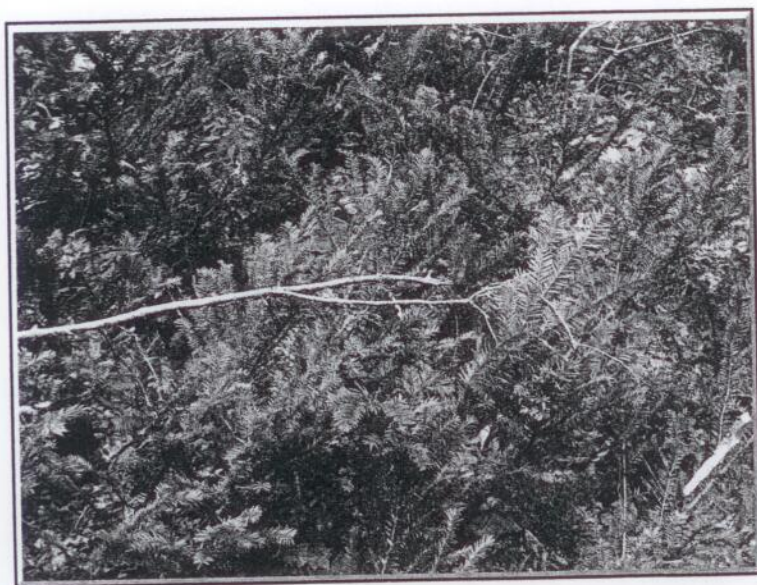
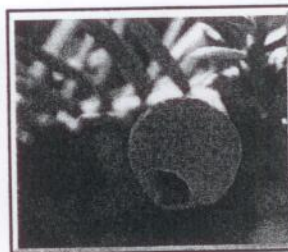
Ground Hemlock's needles are:

- 3/8" to 1.0" (0.8 - 2.5 cm) long
- pointed
- dark green on both sides.

Each needle is connected to the branch by a slender stalk.

#### Fruit:

The red, berry-like fruits are about 1/4-inch in size. Each one contains a small pit.



**Size:** Ground Hemlock branches sweep out across the forest floor and will reach 1 - 2.5 meters (3 - 8 feet) in length. It will often form dense straggly thickets which can make walking difficult.

## Ground Hemlock

True or False Quiz:

1. Ground Hemlock is not used for timber or pulp:

True or False

2. Eastern Yew, another name for ground hemlock, can be found in small pockets throughout Atlantic Canada and in much of Quebec:

True or False

3. Ground hemlock typically grows above all trees:

True or false

4. Because ground hemlock harvesting is new, there are no sustainable harvesting guidelines developed to protect it:

True or false

5. There are no rules about whether ground hemlock patches have commercial value, but factors including size, health of the plant, and the working conditions of the terrain influence the value.

True or False

6. Land owners are not paid for hemlock, it's a natural resource that belongs to the government:

True or False

7. Ground hemlock has blueberry like berries:

True or False

### **Ground Hemlock Answers to True and False Quiz:**

1. T

2. T

3. F: Typically in the under story of mature and semi mature forests.

4. F

5. T

6. F: It is the land owners job to negotiate the price.

7. F: Red berries