

the natives formerly used as an article of food. Synonyms:

Scrub Pine (Pinus Contorta, Dougl.)
Pinus contorta (Hook.)
Pinus balfouriana (Lindl. and Gordon.)

Its habitat is everywhere in the Province on sandy soils and exposed rocky points, seldom growing larger than twelve inches; quite useless for timber and not at all ornamental. Black Pine (Pinus Murrayana, Balfour.)

Synonyms:

Pinus contorta (Macoun.)
Pinus contorta par latifolia (Dawson.)
Pinus laevis (Hook.)

Its habitat is on the slopes of the mountains of the interior of the Province, where it grows in dense masses very straight and long, but of no great size. Most useful for mining purposes, being strong and durable and the only wood procurable in many of the mining districts. It is said to make excellent charcoal, the only coniferous wood to my knowledge that is used for the purpose.

Larch or Western Tamarac (Larix Occidentalis, Nutt.)

Synonyms:

Pinus Larix (Dougl.)
Pinus Nuttallii.

On the slopes of the mountains of the interior mainland. Used for rails, interior fittings, and shakes or shingles, where cedar is not available.

There are several other coniferous trees of the fir or pine and juniper order, which I do not think are necessary to mention particularly.

Broad leaved maple (Acer macrophyllum.) This is probably the commonest and best of our deciduous woods. Its range is all over the lower lands of Vancouver Island, the Gulf Islands, and the mainland to the westward of the Coast Range. It grows to a large size, the trunks frequently attaining to a diameter of three or four feet, and when growing close together or with other trees, very straight and tall. When growing singly in the open, it forms a magnificent shade tree. One remarkable specimen near Victoria covers a space of probably eighty feet in diameter. The wood is close grained, takes a fine polish, and is well adapted for furniture, inside finishing and carriage building. That part which by reason of an abnormal growth is known as bird's-eye maple is very beautiful. Although used by furniture makers in some cases for inside work, it is comparatively little used, and is only cut by one or two mills to supply the demand.

There are two other native maples, viz., the Vine Maple, Acer cinereum, and another resembling it called Acer glabrum. The former is common on the low lands of the mainland to the westward of the Coast range, but does not occur to the eastward of the Coast range, nor on Vancouver or Gulf Islands. As its name implies, it only grows small and crooked, much in the shape of a vine. The latter occurs all over the province, principally in the dry belt to the eastward of the Coast range, where it never gets beyond a bush; and on the islands, where it frequently attains to the dignity of a small tree.

Alder, Alnus Rubra, (synonym A. glutinosus) is another common tree on Vancouver and Gulf Islands and on the mainland to the westward of the Coast range. It attains in many places a diameter of two or three feet, but much of it is under two feet. Growing as it does in close forests, it runs up to a considerable height and is very straight. The wood, which is of a light brownish color, nearly white, resembles black walnut in the grain, and is used, stained to the proper shade, to a limited degree in imitation of the wood, for furniture, inside furnishing, bannisters, &c.

The only other representative of this genus is the mountain Alder, A. columbifolia, a worthless variety and more of shrub than tree. Its range is general throughout the province, generally on mountain sides.

Poplar or Cottonwood (Populus Trichocarpa), sometimes called P. balsamifera, is a common tree throughout the province on low lying lands in the vicinity of water. It attains to a large size in favorable localities, three or four feet in diameter being common, and attaining a great height in close forests along river banks and on low islands. Its wood is very little used, being white and soft, without any great quality to recommend it. The principal use has been put to it for the manufacture of excelsior, for which purpose it is well adapted. It has also been used for boxes, being very light but the objection to its use for this purpose, I am informed, is that it turns

dark after being sawed. Possibly this difficulty could be overcome by allowing the wood to season in the log, or other methods.

Another representative of this genus is the Aspen leaved Poplar (P. tremuloides). Its range is also very wide, occurring as it does in all parts of the province. It does not attain to any great size, twelve inches being probably about the limit. The principal use it is put to is for fence rails in that portion of the province to the eastward of the coast range where other timber is scarce.

Oak (Quercus Garryana or Jacobi). The range of this tree is altogether confined to Vancouver Island and Gulf Islands, not a single specimen occurring on the mainland. Patches of it occur at the southern end of Vancouver Island and for about one hundred and fifty miles north. In some places it attains a size of from three to four feet in diameter, with good straight trunks from which logs can be obtained ten to twenty feet in length. It is likewise a highly ornamental shade tree. The wood resembles English Oak in appearance, having a beautiful grain, but it has never been much used, principally, I believe, on account of the difficulty of seasoning it properly, or rather the necessary room and capital for storing it away for several years. It is used to a limited degree by cabinet-makers, etc., for ornamental furniture and other purposes of that kind.

Canoe birch (Betula Papyrifera) is common on the mainland and very scarce on Vancouver Island. The wood is a good fine grained durable one when not exposed to the weather, but it has never been used to my knowledge for any purpose but for fire wood. It attains a size of from one foot to eighteen inches in diameter, but is often smaller.

Arbutus or Madrona (Arbutus Menziesii). This is quite a common tree on Vancouver and Gulf Islands and on some parts of the coast line of the mainland. It is a striking looking tree with its red bark and bright evergreen leaves. As a rule it does not attain to a great size, especially when growing on exposed rocks and headlands, but trees a foot in diameter are common, although, as a rule, twisted and crooked; when growing in forests, however, it grows fairly straight and sometimes attains a large size. On the Albernia Road, in the vicinity of Nanose Bay, many fine specimens are to be seen. When travelling in company with Dr. Fletcher and Rev. Mr. Taylor two years ago, I took the measurement of one tree which was ten feet five inches in circumference. I am not aware that the wood of this tree has been put to any particular use; it is hard, fine, and close grained, and takes a good polish, but it is apt to warp and check if cut before it is well seasoned.

Dog Wood (Cornus Nuttallii). A highly ornamental tree with immense white flowers, fairly abundant throughout the islands and the coast of the mainland. It often attains a size of twelve inches in diameter and a height of thirty feet or thereabouts, and has a fine grained, hard, pinkish wood which takes a good polish. Not used to my knowledge except in isolated cases for ornamental work.

Buckthorn, sometimes called Bearberry, and from that wrongly often called Barberry (Rhamnus Purshiana) is not an uncommon tree on the islands of Vancouver and the Gulf and on the coast of the mainland. It attains a size of about a foot in diameter, but more frequently smaller. The wood is of a light yellow color, close grained and hard. Not used except for ornamental purposes.

Crab (Pirus Rivalaris) grows commonly in swamps on the mainland to the westward of the coast range, on Vancouver Island and the Gulf Islands. It seldom attains a larger size than nine inches. The wood is hard and close grained, and is principally used for rollers in mills and similar purposes.

The following is from a paper supplied by the government to the Forestry Commission at Chicago in 1893, but I am not now prepared to vouch for the correctness of the figures:

"The average cut is easily 50,000 feet per acre. On the Mainland and Vancouver Island it has varied from 20,000 to 500,000 feet per acre."

Messrs. King and Casey cut 508,000 feet on one acre in the Comox district. This is not the only instance of so large a cut. And this although trees under 2 feet and over 7 feet were not used.

QUANTITY ON THE PRESENT LIMITS.

The acreage is at least this year (1893) 400,000. Suppose the average to be 30,000 feet to the acre, this would give 12,000,000,000 feet on the limits now occupied.

CUT PER ANNUM.

In 1892 the cut was 64,000,000 ft. Add for waste and cut unreported say 40,000,000 ft. This would give 100,000,000 ft. At this rate the present limits would last one hundred and twenty years. This, however, supposes an average of 30,000 feet per acre, no bush fires, and no increase in the annual output.

It is estimated that fire destroys fully 50 per cent. of the timber. This reduces the time from 120 to 60 years. However, the output must rapidly increase and will in the near future be treble what it is to-day. At this rate of cutting the present limits would be worked out in 20 years.

Some say one-third of the limit of the province is taken up. Suppose the entire acreage (of the average 30,000 ft. to the acre) be three times that taken up now. This would give 1,200,000 acres. The time required to cut the entire amount at three times the above output would be 60 years.

Although various causes will hasten the lessening of our forests the natural growth must add considerably to the amount above stated.

The chief element of destruction is fire, which should be guarded against both by the millowners and the Government.

EXPORTS FOR THE FOUR YEARS ENDING JUNE 30TH, 1894.

(To all countries including the United Kingdom.)

Burrard Inlet.....	136,054 M feet.	Value \$1,385,980
Victoria.....	8,352 M feet	" 70,541
Nanaimo.....	6,532 M feet	" 55,128
New Westminster...	5,900 M feet	" 50,012
	156,838	\$1,561,661

(To the United Kingdom alone.)

Burrard Inlet.....	7,161 M feet.	Value \$113,304
Victoria.....	30 M feet	" 255
Nanaimo.....	836 M feet	" 12,180
New Westminster....	nil.	
	8,027	\$125,739

The quantities are approximate, but the values are accurate and include fir, cedar and spruce planks, boards, deals, spars, masts, square timber, laths, poles, and posts.

The provisions of the acts relating to the forests are succinctly as follows:

The Chief Commissioner of Lands and Works is authorized to grant special licenses to cut timber on Crown lands.

No such license is granted for a larger area than one thousand acres nor for a longer period than one year. License costs \$50.

License entitles holder to all rights of property whatsoever in all trees, timber or lumber, within his limits.

The Chief Commissioner of Lands and Works is also authorized to grant a general license to land loggers upon payment of ten dollars to cut timber upon Crown lands, not being timber limits, without any reservation as to the area; such license is personal, however, and limited to one year.

A ground rent of five cents per acre is charged and a royalty of fifty cents per thousand feet, board measure, for general timber suitable for spars, piles, saw logs, railroad ties, props, shingle bolts of cedar, fir or spruce, and a royalty of twenty five cents for every cord of other wood.

A drawback is allowed on exported timber equal to one-half of the royalty. "Timber lands (that is lands which contain milling timber to the average extent of eight thousand feet per acre, west of the Cascades, and five thousand feet per acre east of the Cascades, to each one hundred and sixty acres) are not open for sale."

Under the Bush Fire Act any portion of the province may be created by order in council a fire district. It is unlawful to start a fire in a fire district between 1st of May and 1st October, except for clearing land, cooking, obtaining warmth, or for some industrial purpose. Precautions must be taken in clearing land not to allow fire to spread, and in other cases fires must be extinguished before leaving.

Locomotives are required to have spark screens on their smoke stacks.

Now, whilst the provisions of the acts relating to forest conservation are good as far as they go, the difficulties of enforcing them in a country but sparsely settled are so great that many of them are practically inoperative, and the question naturally arises how can this be remedied. The elaborate and undoubtedly efficient remedies pursued in older countries, notably Germany, are not suited to a