

TREES AND SHRUBS FOR A WINDY AND SNOWY CLIMATE

A list of Trees and Shrubs in Three Newfoundland Gardens

Despite our highly variable, unpredictable, windy and snowy weather, Newfoundland is conducive to a broad range of species and varieties of trees and shrubs. While in some localities it may be difficult to grow tall trees, most areas can accommodate living windbreaks composed of a diverse range of shrubs and small tree species. Living windbreaks that incorporate a variety of deciduous and evergreen species with varying degrees of colour, texture, height and form are most effective functionally and aesthetically. In terms of energy conservation, control of snow drifting and environmental enhancement, and in terms of physiological and psychological benefits, living windbreaks have as great a value in winter as in summer.

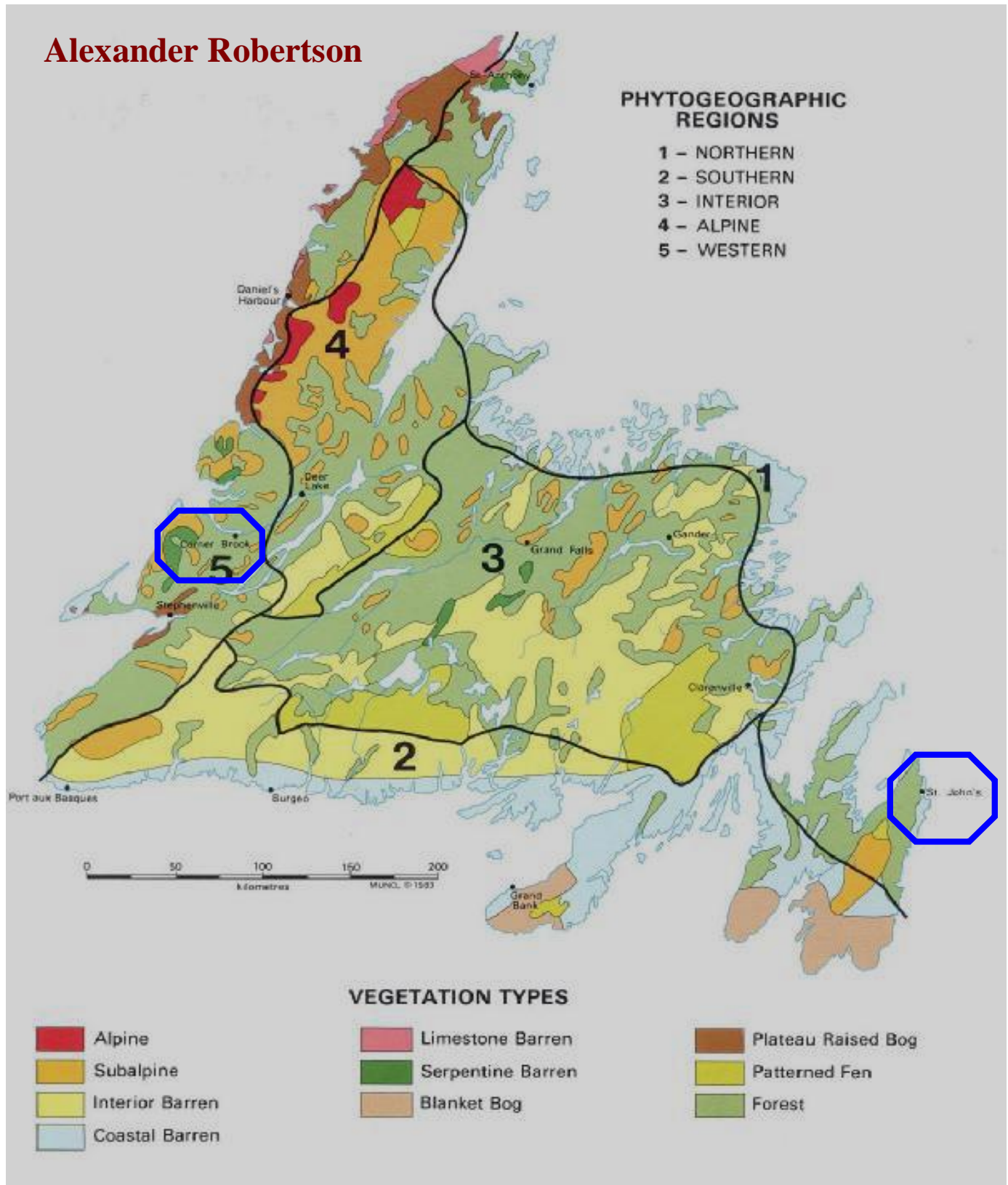
St. John's has one of the mildest winters in Canada. Summers are extremely pleasant. Unfortunately, also being among the windiest of cities in the world tends to detract from benefits it might accrue from its insular climate; noticeable by the fact that Newfoundland often does not have a recognizable spring or fall season. Nevertheless, when landscape designs compensate for wind effects, the microclimate is improved to such an extent that the range of trees and shrubs which can be grown in Newfoundland is extraordinary. Indeed, the native flora contains both temperate and arctic elements. Likewise, such a diverse range is also reflected in cultivated exotic flora, particularly trees and shrubs. In fact, there are very few cities in the boreal zone that have as rich a biodiversity as St. John's. More than 1000 species, varieties and cultivars of native and exotic trees and shrubs are commonly cultivated in Newfoundland gardens, parks, communities and plantations. The appendix indicates the range of cultivated trees and shrubs found in three gardens; viz., Government House, Corner Brook House and the author's suburban garden.

Government House grounds are typical of an open wooded parkland dominated by beech and maple planted about 1860-70. In the past, there were undoubtedly many more shrubs than at present, but of course shrubs were short-lived and have not been replaced. This is unfortunate, because in winter the leafless beech and maple provide little shelter and there is obviously a need to introduce mixtures of coniferous and deciduous trees and shrubs to give protection from the strong westerly and northeasterly winter storm winds. To this end, 2005-07 the author has done substantial under-planting of rhododendrons in the beech grove and also a specially designed shelter belt with an attractive variety of shrubs and a few tree species, along the west boundary of the grounds.

Corner Brook House was built by Bowater (Newfoundland) Ltd. Monty Lewin, Bowater's Vice President and General Manager (1937-55) can be credited with the establishment of urban forestry in western Newfoundland. Lewin was an expert gardener and had a keen interest in trees and shrubs. He developed the exquisite garden at Corner Brook House. The garden is distinctive in that it retains its beauty throughout the year mainly because of the judicious mixture of conifers and broadleaved trees. (Figure 14-16). Secondly, Lewin initiated a vigorous tree and shrub planting program in Corner Brook when it was still a company town. In this context he was the first urban forester in Newfoundland. As the premier garden city of Newfoundland, Corner Brook is notable for its mature trees and shrubs in the core of the city and its many fine gardens.

The author's garden at Brigus Place St. John's (see **Forester's Garden.pdf**) follows the old maxim "practice what one preaches." It is a typical suburban sized lot located on a steep hillside. shows the development of the garden from 1971 -91. From the outset, the garden was designed with winter in mind to provide shelter, privacy and beauty. The element of time was also an important consideration to allow for structural and biological changes. Of course being on a steep hill, it was something of a rock quarry. As the topsoil is scarcely more than 10 cm deep and in a windy area, it would seem rather difficult to establish a garden on such an inhospitable site. On the contrary, with judicious selection of trees and shrubs it is comparatively easy to establish productive gardens on such sites in Newfoundland. The tallest of planted trees at Brigus Place (17-year-old Japanese larch) is 14m tall has reached the same height of a 60 year-old white spruce that survived urban development.

Alexander Robertson



Map showing the location of St. John's – the easternmost city in North America, and Corner Brook in the Bay of Islands in western Newfoundland.

Government House St. John's

New under-planting of rhododendrons under a beautiful European beech grove.



Corner Brook House Corner Brook

The mixed coniferous and broadleaf trees plus a border and understory with numerous varieties of shrubs has a New England landscape style

Brigus Place St. John's

This author's garden was designed first and foremost as a shelterbelt for protection against the persistent, dry westerlies and restrict snow drifting during northeasterly blizzards. At its peak, it had approximately 500 species and varieties of woody plants. Ecological succession and judicious thinning has reduced the number considerably



G = Government House, **C** = Corner Brook House **B** = Brigus Place

COMMON NAME		SCIENTIFIC NAME	G	C	B
LARGE TREES (15-20 m) DECIDUOUS					
Norway maple	Acer platanoides	*	*		
Crimson King	cv. rubrum	*	*		
Schwedler’s	cv. schwedleri	*	*		
Large leaved	cv. stollii	*			
Silver maple	A. saccharinum		*		
Sycamore maple	A. pseudoplatanus	*	*		
variegated	f. variegatum		*		
Horse chestnut	Aesculus hippocastanum	*	*		
American chestnut	Castanea dentata	*			
Red oak	Quercus rubra		*	*	
Burr oak	Q. macrocarpa			*	
White oak	Q. borealis	*	*		
American elm	Ulmus americana	*			
English elm	U. procera	*			
American basswood	Tilia americana	*	*		
Small-leaved linden	T. cordata	*			
Lime	T. x europaea	*			
European beech	Fagus sylvatica	*		*	
Purple beech	f. purpurea	*	*	*	
Weeping willow	Salix babylonica		*	*	
European ash	Fraxinus excelsior	*			
Aspen	Populus tremuloides		*		
Carolina poplar hybrid	P. x euramericana		*		

MEDIUM SIZED TREES (10 - 15 m)
DECIDUOUS

Red maple	Acer rubrum		*	*
Manitoba maple	A. negundo			*
White birch	Betula papyrifera	*	*	*
Mountain paper birch	B. x cordifolia	*	*	*
Blue birch	B. populifolia	*		
Weeping birch	B. pendula var. gracilis	*		
Yellow birch	B. lutea	*	*	*
English oak	Quercus robur	*	*	
Wych elm	Ulmus glabra	*		
European mountain ash	Sorbus aucuparia	*	*	*
Black ash	Fraxinus nigra			*
White ash	F. americana			*
Green ash	F. pennsylvanica		*	*
Lombardy poplar	Populus nigra var. italica		*	
Thornless honey locust	Gleditsia triacanthos var. inermis		*	

CONIFEROUS

Balsamfir	Abies balsamea		*	*
Veitchi's fir	A. veitchii			*
Concolor fir	A. concolor		*	
Douglas fir	Pseudotsuga menziesii		*	
Rocky mountain fir	var. glauca		*	
Blue spruce	Picea pungens	*	*	*
Glauca (bluish-green)	f. glauca		*	*
Koster (bluish/white)	f. Kosteriana	*		*
Norway spruce	P. abies		*	*
pendulus form	var. pendula		*	
White spruce	P. glauca	*	*	*
Black spruce	P. mariana	*		
Austrian pine	Pinus nigra		*	*

Jack Pine	P. Banksiana	*		
Red Pine	P. resinosa	*	*	*
Scots Pine	P. sylvestris	*		
Caledonian Pine	P. sylvestris var Scotica	*		
White pine	P. strobus	*	*	*
Ponderosa pine	P. ponderosa		*	*
Japanese blsck pine	P. thunbergi			*
Tamarack	Larix laricina	*		
pendula	f. penduloides			*
Japanese larch	L. kaempferi			*
European larch	L. europea			*
Hybrid larch	L. x eurolepis			*
Russian larch	L. sukaczewi			*
Eastern Hemlock	Tsuga heterophylla			*
SMALL TREES (5- 10 m) DECIDUOUS				
Dogberry	Sorbus americana	*	*	*
Swedish whitebeam	S. aria	*		
Siberian elm	Ulmus pumila		*	*
Basket willow	Salix viminalis		*	*
Grey willow	S. cinerea		*	
Bayleaf	S. pentandra		*	
Bird cherry	Prunus avium	*	*	
Pin cherry	P. pennsylvanica	*	*	*
Bartlett pear	Pyrus communis cv. bartlett			*
Hedge maple	Acer campestre			*
Japanese maple	A. palmatum cv. atropurpureum		*	*
Full moon maple	A. japonicum			*
Mountain maple	A. spicatum		*	*
Amur maple	A. ginnala			*

Common golden chain	Laburnum anagyroides	*	*	
‘Waterer’	L. x watereri		*	
‘Voss’	cv. vossii			*
Common Hawthorn	Crataegus monogyna	*	*	
Hawthorn	C. oxycantha	*	*	
‘Paul scarlet’	cv. paul scarlet		*	
‘Rose’	<i>f.</i> rosea		*	
‘Plena’	cv. plena		*	
Siberian crab	Malus baccata	*	*	
‘Charlotte’	M. coronarius cv. charlotte		*	
‘Parkman’	M. floribunda cv. parkmanni		*	
‘Rivers’	M. spectabiis		*	
	cv. riversil		*	
‘Arnold’	M. x arnoldiana		*	
‘Carmine’	M. x atrosanguinea		*	
Blue French lilac	Syringa vulgaris cv. coerulea	*	*	*
White French lilac	S. cv. alba	*	*	
HIGH SHRUBS (2- Sm) DECIDUOUS				
Squashberry	Viburnum trilobum		*	*
Wayfaring tree	V. lanatum		*	
Red osier	Cornus stolonifera		*	*
Siberian dogwood	cv. flaviramea		*	*
Variegated dogwood	C. alba cv. elegantissima		*	*
Forsythia	Forsythia x intermedia	*	*	*
Showy gold bell	cv. spectabilis		*	
Spindle tree	Euonymus europaeus		*	
Winged spindle tree	E. alatus var. compactus		*	

Hydrangea	Hydrangea arborescens		*	*
‘Snow hill’	cv. grandiflora		*	
Beauty bush	Kolkwitzia amabiis		*	
Duetzia	Deutzia scabra		*	
Smoke tree	Corinus coggia		*	
Tatarian honeysuckle	Lonicera tatarica	*	*	*
Fragrant honeysuckle	L. fragrantissima	*	*	
Mock orange	Philadeiphus coronarius	*	*	
‘Golden’	cv. aureus	*	*	
Black berry elder	Sambucus nigra	*	*	*
Yellow-leaved	var. aurea		*	
Red berry elder	Sambucus pubens		*	
Siberian pea shrub	Caragana arborescens	*	*	*
Cardinal shrub	Weigelia florida	*	*	
Pink-flowered	f. alba	*	*	
Variegated	cv. variegata			*
Vanicek cardinal shrub	W. venusta		*	*
Japanese cardinal shrub	W. japonica		*	
Stag’s horn sumac	Rhus typhina			*
CONIFEROUS				
Arborvitae	Thuja occidentalis	*	*	*
‘Golden’	cv. douglasii-aurea		*	*
‘George Peabody’	cv. lutea			*
‘Pyramid’	cv. pyramidalis			*
Pyramidal juniper	Juniperus chinensis cv. pyramidalis		*	*

LOW SHRUBS (1.5-2 m tall)				
DECIDUOUS				
Chuckly pear	Amelanchier bartramiana			*
Rhodora	Rhododendron canadense			*
Rhododendron	R. maximum	*	*	*
Rhododendron	R. morelinianum			*
Rhododendron	R. catawbensis		*	*
lilac	cv. roseum elegans		*	*
purple	cv. purpureum elegans		*	*
white	cv. albiflorum	*	*	*
	cv. Yaku angel		*	*
Snowberry	Symphoricarpos albus	*	*	*
Golden ninebark	Physocarpus opulifolius var. lutea			*
Dog rose	Rose multiflora	*	*	*
Roses	Rosa	*	*	*
Privet	Ligustrum multiflora	*		*
Meadowsweet	Spirea latifolia			*
Anthony water spirea	S. bumalda var. anthony waterer	*	*	*
‘Gold flame’	cv. aurea		*	*
Bridal wreath	S. prunifolia	*	*	*
Chinese lilac	S. x prestonia	*	*	*
	S.x joseflexa		*	
Persian lilac	S. persica		*	
Barberry	Berberis thunbergii		*	
Purple barberry	cv. atropurpureum		*	
Cotoneaster	Cotoneaster multiflora			
CONIFEROUS				
Blaauw’s juniper	Juniperus x media cv. blaauw		*	*
Skyrocket juniper	J. virginiana cv. skyrocket			*
Swedish juniper	J. communis var. suecica		*	*
Dwarf western red cedar	Thuya plicata		*	*
	cv. R. smithii		*	*
Yew	Taxus baccata	*		
‘Dovaston’	cv. dovastonii		*	
Mugo pine	Pinus mugo var. mugo		*	*
Bristlecone pine	Pinus aristata			*

VERY LOW SHRUBS (0.5 - 1 m)				
Dwarf pea shrub	Caragana arborescens		*	
	cv. nana		*	*
Bog laurel	Kalmia angustifolia			*
Wild raisin	Viburnum cassinoides			*
Mountain holly	Nemopanthus mucronata			*
Chokeberry	Aronia prunifolia			*
Holly	Ilex aquifolium	*	*	*
Japanese Holly	Ilex crenata cv. Golden gem			*
Oregon grape	Mahonia aquifolium		*	
Quince	Cydonia oblonga		*	
Japanese quince	Chaenomeles japonica		*	
Cotoneaster	Cotoneaster horizontalis		*	*
Chinese azalea	Azalea molle		*	*
Kurum azalea	A. obtusum		*	
‘Kaempfer’	cv. kaempferi		*	*
‘Kurume’	cv. japonicum		*	
‘White Kurume’	cv. album		*	*
Schlippenbach azalea	A. schlippenbach			*
Arctic willow	Salix purpurea var. nana			*
Woolly willow	S. candida			*
Bog rosemary	Andromeda glaucophylla			*
Daphne	Daphne mazereum			*
Shrubby cinquefoil	Potentilla fruticosa	*	*	*
white-flowered	cv. vanicek			*
	cv. Red ace			*

Low Shrubs (0.5-2 m)				
Coniferous				
Arborvitae	Thuja occidentalis			*
Broad leaved Arborvitae	Thujopsis dolabrata var Hondai			*
‘Globe’	cv. woodwardli			*
‘Berckmann’	cv. aurea nana			*
Spreading juniper	Juniperus communis			*
	var. depressa			*
Creeping juniper	J. horizontalis var. procumbens		*	*
Hetz blue juniper	J. x media cv. Hetzii		*	*
Pfitze juniper	J. x m. cv. pfitzeriana		*	*
‘Nick’s compact’	cv Nick’s compacta			*
‘Golden Pfitz	cv. aurea		*	*
‘Old Gold’	cv. old gold		*	*
‘blue pfitzer’	cv. p. glauca		*	*
‘Golden plume’	cv. plumosa aurea		*	*
‘Blue star’	cv. blue star			*
Japanese garden jumper	J. procumbens			*
Savin	J. sabina cv arcadia		*	*
‘Blue Danube’	cv. blue danube			*
‘Tamarix’	cv. tamariscifolia		*	
Canaert jumper	J. virginiana			*
	cv. canaertii		*	
Dward thread cypress	Chamaecyparis pisifera		*	*
	cv. filifera nana			
Nest spruce	Picea abies f. nidiformis		*	*

GROUND COVER				
Bearberry	Arctostaphylos uva-ursi			*
Periwinkle	Vinca minor		*	*
Heather	Calluna vulgaris			*
	cv. albajae			*
Heather	cv. alba plena			*
	cv. Gold dust			*
	cv. Mrs. Ronald Gray			*
	cv. Roberts Chapman			*
Heath	Erica cinerea			*
	E. x Darlyensis			*
	cv. Jack Brummage			*
Dwarf willows	Salix reticulata			*
	S. repens			*
	S. calcicola			*
	S. uva-ursi			*
Cassiope	Cassiope hypnoides			*