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Our list of Forest, Evergreen and Ornamental Trees is not a long one. We grow the kinds we know to be hardy and valuable, and none others. We can only furnish these kinds and sizes, and at prices named within. We have no Special Rate.



FALL 1889.

SPRING 1890.

# WHOLESALE CATALOGUE

- OF THE . .

# WAUKEGAN NURSERIES

# R. DOUGLAS & SONS,

PROPRIETORS.

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U.S. Department of Agricult

WE call special attention to the very low prices at which we offer the within, first quality stock, and beg leave to state, to those receiving this, our catalogue, that these are our cash prices from which we allow no discount.

With our experience of over 35 years in growing Evergreens from seeds, packing and shipping millions annually, we are glad to be able to say that we ship them to arrive as safely and transplant as successfully as Apple or other deciduous trees.

Our packers are men who thoroughly understand their business, having had over twenty-five years experience in our employ.

We would call the attention of importers to the fact that our Seedling Evergreens and Larches make a free growth the season they are transplanted, while imported trees rarely make a satisfactory growth until the second season after planting, and that ours are not so likely to be damaged on the route as trees must necessarily be kept from a free circulation of air in crossing the Atlantic.

Our Seedlings are all assorted before shipping, and only first-class plants are sent out.

We have by far the largest stock of Evergreens in America, all grown from seeds in our own Nurseries.

TERMS AND CONDITIONS.—The terms of payment must invaribly be cash, or satisfactory security before shipping.

When goods are ordered by express, C. O. D. one-half the amount in cash must accompany the order.

We pack in strong, light boxes, for which we make a moderate charge.

No charge is made for delivering goods at Freight and Express office.

After delivering our goods to forwarders, our responsibility ceases.

When losses occur through detention or neglect en route, claims should be made at once, on the forwarders.

Any mistake of ours promptly corrected if notified within ten days from receipt of goods.

Purchaser will confer a favor by stating the manner in which they wish their goods sent, by Freight or Express; also the route from Chicago, if practicable. Write Post Office address plainly.

The articles on the following list will be furnished at annexed prices only when the quantity specified is taken, except as follows: 50 at 100 rates, 500 at 1,000 rates, etc. Rates by the 100 or 1,000, etc., will not apply when two or more articles or classes offered separately are included to make up the required number. We have by far the largest stock of Evergreens ever offered in the United States. all grown from seeds on our own grounds.

Our Nurseries are located on the Western shore of Lake Michigan, thirty-five miles north of Chicago, on the Milwaukee division of the Chicago & North-western Railway, (on which there are eight passenger trains each way daily, between Chicago and Milwaukee), and in direct communication, by railroad or steamboat, with all the principal thoroughfares East and West.

Our stock is remarkably well grown, and no inferior plants will be sent out.

## DESCRIPTIONS.

THE WHITE PINE is, without a doubt, the most valuable timber tree for Northern Illinois, Northern Iowa, Minnesota, Dakota, Wisconsin, Canada and the New England States. It will not grow so rapidly as the Scotch Pine the first five years, but after ten years' planting it far excels the Scotch Pine in growth.

THE SCOTCH PINE is one of the most rapid growers of all our hardy Evergreens while young, and makes an excellent wind-brake for sheltering orchards, buildings, etc.

THE NORWAY SPRUCE is so well known as being one of the best Evergreens for ornamental purposes, that it is only necessary for us to say that it is also valuable for hedges and screens.

THE AMERICAN WHITE SPRUCE is far preferable to the Norway Spruce for the West, as it endures the hot, dry winds in summer and never browns in severe winters.

THE AUSTRIAN PINE.—The Black Pine of Austria was introduced into Britain in 1835, and into this country a few years later, and is decidedly a favorite in ornamental grounds, it is very hardy, symmetrical and compact, presenting a dense mass of rich, dark green foliage in winter.

THE EUROPEAN OR TYROLESE LARCH (Larix Europa) is the great timber tree of Europe, combining rapid growth with great durability and extreme hardness.

It is also very desirable as an ornamental tree, its conical shape, regular delicate branches, and soft, light green leaves makes a striking contrast to the different varieties of European and other ornamental trees.

Four by four feet is the distance recommended for planting the Larch and other coniferous trees in forests, as, at that distance apart, they can be worked both ways with a cultivator for two or three years. The side branches will by that time shade the ground and destroy the undergrowth, and no more cultivation will be required.

The European Larch should be planted as early in spring as possible, as it commences growth at a very low temperature. If done early, no tree will stand transplanting better. It should never be planted on low, wet ground. It grows on all rich uplands and even on land too dry and poor for almost any other trees except Scotch and White Pines.

The Larch should not be planted as a forest tree south of 40 degrees. It is perfectly hardy in Minnesota, Dakota and Canada.

PRUNUS SEROTINA.—We call special attention to the Wild Black Cherry (Prunus Serotina),—one of the most rapid growers of all our valuable Northern hard wood forest trees, making lumber almost equal in value to the Black Walnut; grows freely on any dry land, even if too poor for agricultural purposes, healthy, of upright growth, and easily transplanted.

THE RUSSIAN MULBERRY grows rapidly when young, and makes a good wind-brake.

THE EUROPEAN ALDER is a large tree of very rapid growth, and is adapted to land too wet for other forest trees; also grows well on dry land.

THE YELLOW AND CANOE BIRCH are both valuable timber trees, perfectly hardy in Minnesota, Dakota and further north.

#### Fraxinus American.

THE AMERICAN WHITE ASH is one of the most valuable and profitable trees for forest planting. The Massachusetts Board of Agriculture have offered very liberal premiums to encourage the planting of this tree within that State.

Prof. Budd, of Iowa, says: "A grove of ten acres, thinned to six feet apart, containing twelve thousand trees, at twelve years, were eight inches in diameter and thirty-five feet high, the previous thinning paying all expenses of planting and cultivation.

"Ten feet of the bodies of these trees were worth, for making bent stuff, etc., forty cents each, and the remaining top ten cents, making a total of \$6,000 as the profits of ten acres in twelve years, or a yearly profit of \$50 per acre."—Northrop's Economic Tree Planting.

## Catalpa speciosa or Western Catalpa.

We call particular attention to this valuable tree. Its hardiness has been tested up to 42 degrees north latitude. It is more upright and symmetrical in its growth and hardier than the Common Catalpa (C. big ninoides), which will not endure our Western winters north of 40 degrees.

We have personally examined into, and found positive proof in numerous cases of this timber having stood as fence posts for a great number of years without decay. Its great durability, its tenacity of life, the ease with which it is transplanted, and its rapid growth, make it in our opinion, one of the most profitable trees for forest growth south of 42 degrees.

Common Locust.—We have examined this tree thoroughly in New Mexico, Colorado, Wyoming, Utah, Nevada and generally through the dry regions of the West, where it makes a better growth without irrigation than any other tree. It is a rapid grower, timber durable and valuable. It is entirely free from the borer in dry climates. We would recommend planting intermixed with Mulberry, the trees in plantations to stand 4 by 4 feet apart. It is not hardy in Northern Dakota and Montana.

All trees should be unpacked as soon as received from the Nursery; the roots dipped in mud about the thickness of paint, and either planted immediately, or heeled in, in a shady place till ready to plant. Be careful not to wet the foliage of Evergreen trees when puddling the roots and to keep the roots from drying till planted.

## EVERGREEN TREE SEEDLINGS.

The following are very fine, stocky and well rooted, and far superior to imported trees of same age.

	Per	100	1.00	00	10	.000
Norway Spruce 4 to 6 inches—2 years	\$	60	\$ 4	50	4	40 0
Norway Spruce 6 to 9 do -3 do		7.5	6	00		55 0
Norway Spruce10 to 12 do -4 do root pruned		1 50	10	00		2.00
White Spruce 3 to 5 do -2 do		1 00	6	00		
White Spruce 6 to 9 do -3 do		1 50	9	00		
Douglas Spruce 4 to 6 do -2 do		3 50	30	00		
Austrian Pine do		00	5	00		
Austrian Pine 3 do		1 00	7	00		
Scotch Pine 4 to 6 inches-2 do		50	4	00		35 6
Scotch Pine 6 to 9 do -3 do		1 00	6	00		55 5
Scotch Pine10 to 12 do		1 50	Q	00		
Red Pine 2 do		1 00	7	50	1	70 0
Red Pine 3 do		1 50	10	00		
Balsam Fir do		75	5	00		
Balsam Fir do		1 00	-	00		
Arbor Vitæ		75	5	00		
Picea Concolor of Colorado, 4 to 6 inches-2 do		5 00	-			

#### EVERGREEN TREES.

TRANSPLANTED.

All thrifty, stocky and several times transplanted.

	Per	Ooz.	10	0	1.	.000
Norway Spruce 4 feet-very strong and fine	\$ 6	00	\$ 40	00	-	
Norway Spruce 21/2 to 31/2 ftvery strong and fine		00		00		
Norway Spruce 18 to 20 inches		50		7 00		
Norway Spruce 10 to 15 do		7.5			\$	35 0
White Spruce 2 feet-all fine specimens.		50		•	1	00
White Spruce 18 to 20 inches		00	ĺ			
White Spruce 12 to 15 do	1	75	1 1:	2 00		
White Spruce 6 to 10 do		13	1	3 00	1	25 0
Hemlock Spruce 2½ feet	1 :	50	1		1	
Austrian Pine 21/2 do -very broad		00	2	5 00		
Austrian Pine 12 to 18 inches		00		2 00		
Scotch Pine 12 to 18 do	1	00		00		40 0
Scotch Pine 2 to 21/2 feet	1	50		7 00		65 0
Scotch Pine 2 to 21/2 do -lighter				00		40 (1
Mountain Pine, Dwarf 12 to 18 inches	1	25		8 00	1	
White Pine 6 to 10 do	į.	50		00		25 0
White Pine 12 to 18 do	1	00		00		55 0
White Pine 20 to 30 do		00	1	00		00 0
White Pine 21/2 to 31/2 feet		00	10	00	1	50 0
Balsam Fir 3 to 4 feet	1	50			1	
Balsam Fir 41/2 to 5 feet		00			1	
Arbor Vitæ r foot-transplanted		,		00	İ	18 0
Arbor Vitæ 2 to 21/2 feet			10	00	1	
Arbor Vitæ 3 feet			1	5 00		
Arbor Vitæ 4 feet				00 0	1	

<sup>\*</sup> The Mountain Pine is a dwarf variety, making a handsome tree for lawn purposes.

## NEW AND RARE EVERGREENS.

The Blue Spruce of Colorado, *Picea pungens*, of the botanists, varies from deep green to light and dark blue in color. They are all beautiful, valuable and perfectly hardy trees, but the blue ones are most admired.

Two of the leading Nursery firms in England have offered to take all our selected Blue ones at our own price, but the main object we had in introducing this tree, and the Douglas Spruce of Colorado, was to furnish conifers that would endure the summer drouths and winter blasts on our western prairies; we therefore offer the selected blue trees at a high price and the greener ones at a lower price than if sold without selection.

The Colorado Blue Spruce, the Douglas Spruce of Colorado, *Pseudotsuga Douglasii* (Engelm) and the White Spruce, *Picea alba* are the most ornamental and most hardy of all the spruces.

Specimen trees of these three kinds from 20 to 30 feet high, in Massachusetts, Illinois, Iowa, Kansas and Nebraska, convince us that they will stand extreme drouth in summer and extreme cold in winter better than the common so-called hardy evergreens.

#### NEW AND RARE EVERGREENS --- CONTINUED.

	Pr Pair	Per Doz	Per 100
Abjes Concolor of Col—fine specimens—2½ feet	\$ 5.0	)	
Picea pungens, Col. Blue Spruce—selected blue-21/2 feet.	4.0	9 20 00	
Picea pungens, Col. Blue Spruce-selected blue-2 feet.	3 0	15 00	
Picea pungens, Col. Blue Spruce—selected blue—1 1/2 feet.	2.0	10 (6)	
Picea pungens, Col. Blue Spruce—selected green -3 feet.	1.0	5 00	\$ 35 00
Picea pungens, Col. Blue Spruce-selected green -2 feet.	7	3 50	25.00
Picea pungens, Col. Blue Spruce-as they run6 to 10 inches		1.50	6.00
Engelman's Spruce of Col., 2 feet.	3 0	)	
Douglas Spruce of Col., 5 feet—selected	3 0	18.00	
Douglas Spruce of Col., 4 feet-selected	2.0	10.00	75.00
Golden Arbor Vitæ, Douglas', 4 to 5 feet-selected	4.0	)	
Golden Arbor Vitæ, Douglas', 1 foot		4 00	
Little Gem Dwarf Arbor Vitæ, Douglas', 10 inches diameter		5.00	
Pyramidal Arbor Vitæ, Douglas', 2 feet		6.00	
Abies Siberica, Siberian Silver Fir, 1 foot		4 00	
Waukegan Trailing Juniper, 2 years, transplanted		1.50	
Douglas Spruce of Col., 6 to 10 inches, transplanted		1 (k)	

Golden trees should be planted in full sunlight.

#### FOREST AND ORNAMENTAL TREES.

	Per	100	1,00	00	10,000
White Ash	3,	7.5	\$ 3	Ser	\$ 30.0
Green Ash 12 to 18 inches—first class		7.63	- 3	50	30.0
Box Elder 1 vear		50		00	25.1
Soft Maple 1 to 2 feet		1 (00)		50	30.0
Catalpa speciosa I to 2 feet		7.5		50	2011 (1)
European Larch 12 to 18 inches		2 00	16	00	
European Larch		7.5		00	
European White Birch 2 to 3 feet		1.50		On-	
European White Birch 18 to 20 inches		1 10		(10)	
European White Birch10 to 15 inches.		7.7	4	UU	
Yellow Birch		00			
Canoe Birch		1.00			
Wild Black Cherry 2 to 3 feet		2 (8)			
Wild Black Cherry12 to 18 inches		(1)	-	UCI	
Wild Black Cherry 6 to 12 inches.		75		(11)	
Russian Mulberry 1 and 2 years		7.5		(1.1	
European Mountain Ash 1 year		1 (81		(30)	
American Mountain Ash 3 feet, transplanted		1 (1()			
White Elmro to 15 inches		75	.5		
White Elm S to 10 inches		4 - 1		00	
Horse Chestnut 1 foot, transplanted		5 09		Call	
Black Walnut I to 2 feet, root pruned		1 50		150	
Yellow Locust, (for the far west) 1 to 2 feet.				00	

## Directions for Sowing Evergreen Seeds.

Sow Evergreen seeds broad cast in beds 4 feet wide, light, sandy loam, cover very lightly. Shade the beds from the sun for the first year, either with lath frames or brush. The seeds are sown dry. The beds must be carefully handweeded the first and second years. The seedlings are then of proper size to be thinned out of the beds and planted in nursery.

#### Deciduous Tree Seeds.

Ash, Hard Maple, Box Elder, Black Cherry, etc., are better kept in moist sand during winter and sown in early spring. Catalpa, Birch and Ailanthus are kept dry in winter and sown in spring. Hard shelled seed, like the Locust should be soaked in hot water before sowing in spring. Soft Maple and Elm should be sown

as soon as ripe in May or early June. All the above except Catalpa, Ailanthus and Locust are better sown early, or as soon as the ground is in condition in spring.

#### EVERGREEN TREE SEEDS.

P		Per Oz.		Lb.
Abies, alba, White Sprace	\$	50	\$ 5	00
Abies excelsa. Norway		25	1	50
Picea balsamea, Balsam Fir		25	1	50
Pinus Austriaca, Austrian Pine		25	1	50
Pinus strobus, White Pine.		30	2	50
Pinus sylvestris, Scotch Pine	ì		1	50
Juniperus virginiona, Red Cedar				75
Juniperus prostrata, Prostrate Juniper				7.5
Juniperus Waukegan Trailing				7.5
Thuya occidentalis, Am. Arbor Vita-		4C	4	00
Colorado Blue Spruce, from bluest trees			1.2	00
Abies concolor, from Colorado	i		10	00

#### DECIDUOUS TREE SEEDS.

	Per	0z.	Per	Lb.
Acer platanoides, Norway Maple	*	26	3	50
Acer saccharinum, Sugar Maple		25		50
Acer negundo, Box Elder per bushel \$3.50		25		1 50
European White Birch		30		2 60
Yellow Birch		30		2 00
Papyracæ, Canoe Birch		30		2 00
Catalpa speciosa, Western or Hardy Catalpa		25		50
Fraxinus alba, White Ashper bbl. \$8.00		25		00
Fraxinus viridis, Green Ashper bbl. \$8.00		25		00
Russian Mulberry				00
Larix Europa, European Larch		25		25
Prunus serotina, Wild Black Cherry		15		1 50
Robinia Pseudo-Acacia, Yellow Locust.		25		75
Pyrus Acuparia, European Mountain Ash	I		1	50

## FOREST TREES BY MAIL.

Our experience, made the last eight years, of sending dollar packages of the best Forest and Ornamental Tree Seedlings, postpaid, met with such success and so many encomiums from every part of the country, that we shall in future devote special attention to this business. The postage on each package and the labor of packing them costs nearly fifty cents, so the direct profits of this business are very small; but then, when a man once begins planting trees he is sure to keep on doing so, and we hope by placing good trees in small quantities, and at cheap rates within the reach of all, to build up among the farmers in every part of the country the habit of planting every year a hundred or more trees, and of considering tree-planting a part of their regular farm work.

These trees reach their destination in any part of this country in as good condition as when leaving the nursery. We now send small packages of Evergreen trees, by mail, to Europe in perfect order, and have sent Catalpa trees to the East Indies, 400 miles inland from Calcutta, that all lived and were in leaf ten days from time of planting.

# WE OFFER THE FOLLOWING PACKAGES BY MAIL, POSTPAID, FOR \$1.00 PER PACKAGE.

Our mail packages are made up of the number set opposite each kind, and we never divide the packages, nor put more than one kind in each \$1.00 package.

No. 1—100 European Larch, 1 year.
No. 2—100 White Ash, 10 to 12 inches.
No. 3—100 Green Ash, 10 to 12 inches.
No. 4—100 Hardy Catalpa (Catalpa speciosa),
10 to 12 inches.
No. 5—100 White Elm, 1 year.
No. 6—75 European Mountain Ash, 1 year.
No. 7—75 Wild Black Cherry, 10 to 12 inches.
No. 8—100 European Mountain Ash, 1 year.
No. 10—100 European White Birch, 1 year.
No. 13—100 Norway Spruce, 4 to 6 inches.
No. 15—100 Am. Arbor Vite, 3 to 5 inches.
No. 10—100 European White Birch, 1 year.
No. 13—100 Norway Spruce, 4 to 6 inches.
No. 16—50 Balsam Fir, 3 years.
No. 10—100 European White Birch, 1 year.
No. 13—100 Norway Spruce, 4 to 6 inches.
No. 16—50 Balsam Fir, 3 years.
No. 10—100 Sootch Pine, 4 to 6 inches.
No. 20—75 Am. Linden, 1 year.
No. 21—100 Box Burden Mulberry, 1 year.
No. 13—100 Am. Arbor Vite, 3 to 5 inches.
No. 10—100 Sootch Pine, 4 to 6 inches.
No. 20—75 Am. Linden, 1 year.
No. 21—100 Box Burden Mulberry, 1 year.



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