

Recently Introduced Plants from Saratoga Horticultural Research Foundation and Techniques for Their Propagation

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PLANT DESCRIPTIONS

***Agapanthus* 'Storm Cloud'**

The umbels, about 7 in. in diameter have tubular very deep blue-violet flowers that bloom mid-summer to early-fall and are borne on stalks 3 to 4 ft. high. The growth habit is similar to that of *Agapanthus africanus*, forming circular clumps 2 ft tall by 3 ft wide.

It is evergreen to 28F and in warmer areas can be used in mass plantings; in colder areas as color accents. 'Storm Cloud' does well in full sun to part shade although the flower stalks may be taller in sun and umbels larger in full sun. In hot environments 'Storm Cloud' should be placed where it is lightly shaded during the hottest part of the day.

It is an adaptable, easy care plant, preferring rich, moist, well drained soil although once established it is tolerant of drier conditions.

The original specimen of this plant was a seedling produced by Barrie Coate from the cultivar 'Mood Indigo', a hybrid developed by the Los Angeles State and County Arboretum by hybridizing *A. africanus* with *A. pendulus*, a very dark purple species.

***Arbutus* 'Marina'**

A sun-loving, highly ornamental, evergreen flowering tree noted for deep green foliage, pendulous clusters of deep pink flowers, strawberry-like fruit, and gorgeous, peeling, cinnamon-red bark. Its mature height is up to 40 ft with equal spread. It grows fast when young and moderately with age. It blooms from December through February, and occasionally again in the summer. It produced much less fruit than the *A. unedo*.

It will tolerate typical gardening conditions and regular watering as long as the soil is well drained, but it does well in heavy soil if not over watered. Once established, it may be treated as drought tolerant.

The cultivar name commemorates the location of Western Nursery in San Francisco's Marina District (where the first propagation was done from a specimen that arrived for the 1917 Exposition). *Arbutus* 'Marina' is a tribute to the owner of this nursery and one of California's early nurserymen, Charles Abrahams.

***Laurus* 'Saratoga'**

A vigorous and versatile evergreen tree with fragrant foliage and clusters of small yellow spring flowers. *Laurus* 'Saratoga' does well in full sun to part shade, is drought tolerant, and grows to 25 ft tall with the same spread. Leaves are elliptic, 3 to 5 in. long, shiny, dark green on top and lighter below, and aromatic when crushed.

The flowers are male, so no fruit is produced from the flower clusters produced in the leaf axils.

Laurus 'Saratoga' is a robust plant with all the vigor associated with hybrids. It has the capacity to produce a single-trunked specimen tree with a dominant leader that will continue in the development of the crown or it can be grown to produce an open, multi-stemmed tree by pruning the leader at an early stage of development. It is easier to grow as a tree and suckers less than *L. nobilis*. It can also be used as a dense and strongly growing hedge if sheared.

***Lonicera nitida* 'Maigrun'**

This tough and vigorous compact groundcover or low hedge has small round leaves with glossy leaves of medium green color which remains consistent. Its yellow flowers are insignificant and bloom in spring. It can be pruned as a formal border, as a boxwood would be used, or used as an informal border with a graceful and solid effect.

It will grow to 2 to 3 ft in height and spread 6 ft wide. *Lonicera nitida* 'Maigrun' leaves are long lasting. 'Maigrun' is drought tolerant and pest resistant, an easy-care plant that grows in most soils, in sun or shade.

This *Lonicera* is currently one of the top groundcovers used in France. It has been replacing *Cotoneaster*, that is prone to fire-blight disease.

***Sequoia sempervirens* 'Simpson's Silver'**

A rapidly growing redwood tree with silver-blue foliage and a dense pyramidal shape. It produces a definite vertical leader forming a moderately tapered trunk and a rather dense crown. It produced no cones and will reach a height of 60 to 70 ft in 20 years, spreading to 20 to 30 ft.

Sequoia sempervirens 'Simpson's Silver' has a horizontal and whorling branching habit with the tips of the branches growing upward, highlighting its silver-blue color.

The tree maintains juvenile foliage through the 1-gal stage and does not begin to show both its true form and color until the plant is well along in the 5-gal can stage.

The original tree of this introduction was found growing near Eureka at an elevation of 800 ft in July 1975. It was about 45 years old and 127 ft tall with a trunk diameter of 17.5 in.

It is insect and disease free and is frost hardy in most California areas.

It responds to summer water if planted away from the coast.

***Tristaniopsis laurina* 'Elegant'**

This is a small to medium-sized Australian evergreen tree notable for its elegant bark, fragrant flowers, semiformal appearance and red-tinged new growth. The profuse flowers are 3/8-in. lemon-yellow blossoms in cluster of 4 or 5 near the stems, blooming in spring. Its mahogany-colored bark peels to expose a satiny-white under surface. The graceful evergreen foliage of 'Elegant' is twice as large as the standard species and has wine-red colored new growth. It is insect and disease resistant.

Tristaniopsis laurina 'Elegant' is frost hardy and can be grown as single-trunk or multi-stemmed tree, as a specimen plant, or as screen or background planting. It can also be used as a dense and strongly growing hedge if sheared.

'Elegant' is tolerant of most soil conditions and will even flourish in heavy soils. Although seasonably drought tolerant, it grows best with supplemental summer

watering.

PROPAGATION TECHNIQUES

Environment in San Martin, California.

- Winter temperatures as low as 22 to 25F.
- Summer ranges up to 95 to 110F; often a strong afternoon wind.
- All of our propagation media is perlite and peat (4 : 1, v/v).

Agapanthus 'Stormcloud'

We do this one from tissue culture through Briggs Nursery of Olympia Washington.

Plant material is initiated from floral buds using (initiation process takes about one month): MS salts, 50 mg liter⁻¹ 2iP, 0.02 mg liter⁻¹ NAA, 30 g liter⁻¹ sucrose, 5 g liter⁻¹ agar, pH maintained at 5.7

Multiplication of the tissue takes place on the same medium. Subculturing is repeated every 6 weeks for as long as is necessary to produce the desired number of plants.

Plant material is then rooted in vitro using: MS salts, 1.0 mg liter⁻¹ NAA, 600 mg liter⁻¹ activated charcoal, pH maintains at 5.7, 30 g liter⁻¹ sucrose, 5 g liter⁻¹ agar

Plantlets transplanted into plug trays (72) for growing on.

Comments: Divisions can be made in the early spring or late fall. Keep divisions on the dry side to avoid rot.

Tissue culture liners to 1-gal size take approximately 4 months in the winter under plastic cover.

Arbutus 'Marina'

We do this one from tissue culture though Briggs Nursery of Olympia Washington.

Plant material is initiated from vegetative stems using (initiation process takes about 2 months): WPM Salts, 2.0 mg liter⁻¹ Zeatin, 20 g liter⁻¹ sucrose, pH maintained at 4.5, 5 g liter⁻¹ agar

Multiplication of the tissue takes place on the same medium. Subculturing is repeated every 8 to 10 weeks for as long as is necessary to produce the desired number of plants.

Plant material is then rooted ex-vitro in a peat and perlite (1 : 1, v/v) mix.

Rooting occurs within 3 weeks with no need for auxin pretreatment.

Plantlets are transplanted into plug trays (128) for growing on.

Comments: Cuttings taken from mature plants, that were not propagated from tissue culture do not tend to root very readily. Some growers are taking cuttings from plants that were propagated through tissue culture and the rooting percentages are slightly higher. We are trying this now with IBA at 5000 ppm.

Liner to finished 1 gal takes 6 months.

Laurus 'Saratoga'

Type of wood: Semi-hardened cuttings of summer growth, tips and seconds used.

A) Date initiated:	10 Jan 96
Number of cuttings	2304
Number rooted	1044
Percent rooted	45.3
Date rooted:	7 Apr 96

B) Date initiated:	13 Mar 96
Number of cuttings	4961
Number rooted	3714
Percent rooted	74.8
Date rooted:	12 Jun 96

Preparation of cuttings: Washed in a mild soap.

Rooting compound: Hormex #8

Environment: Bottom heat at 70F; mist 8 sec in summer, 15 in winter every 20 min.

Comments: We can take cuttings into winter depending on the condition of the wood. For example, this past year, with a mild winter, we took cuttings through February.

***Lonicera nitida* 'Maigrun'**

Type of wood: Slightly hardened wood from new growth year-round, tips and seconds used.

Date initiated:	2 May 96
Number of cuttings	1014
Number rooted	998
Percent rooted	98
Date rooted:	9 Aug 96

Preparation of cuttings: Washed in a mild soap.

Rooting compound: Hormex #3

Environment: Bottom heat at 70F; mist 8 sec in summer, 15 in winter every 20 min.

Comments: Rooted cuttings to finished liner takes 2 months. Liner to finished gallon takes about 3 to 4 months.

***Sequoia sempervirens* 'Simpson's Silver'**

Type of wood: Tip cuttings

A) Date initiated:	23 Jan 96
Number of cuttings	1221
Number rooted	448
Percent rooted	36
Date rooted:	2 Aug 96

B) Date initiated:	27 November 95
Number of cuttings	1296
Number rooted	777
Percent rooted	59
Date rooted:	1 Aug 96

Preparation of cuttings: Washed in a mild soap.

Rooting compound: IBA 5000 to 10,000 ppm.

Environment: Bottom heat at 70F to speed rooting in the first 2 months, after which they remain on a cool bench in greenhouse; Mist is only once per hour, if necessary.

Comments: Rooted cutting to a finished liner takes 2 to 3 months. Liner to finished gallon takes 8 to 9 months. We have found patience to be the key to rooting Sequoias.

***Tristaniopsis laurina* 'Elegant'**

Type of wood: In fall, hardened-off summer's growth—tips and seconds used.

A) Date initiated:	20 Apr 96
Number of cuttings	1011
Number rooted	262
Percent rooted	26
Date rooted:	2 Mar 96
B) Date initiate:	2 Mar 96
Number of cuttings	1802
Number rooted	515
Percent rooted	29
Date rooted:	7 July 96

Preparation of cuttings: Washed in a mild soap.

Rooting compound: Hormex #8

Environment: Bottom heat at 70F; mist 8 sec in summer, 15 in winter, every 20 min.