

Subtropical Bonsai for Indoor Gardening

by CONSTANCE TORTORICI DERDERIAN

Traditional bonsai are trained hardy trees and shrubs grown in classic containers on shelves or benches and brought indoors to be enjoyed for a day or two, then returned to the growing area. In winter they require dormancy, as do the same species growing in the ground. If one has succumbed to the charm of these miniatures of nature and one lives in a cold climate, winter is a time of parting, for the bonsai must go into a cold frame or other storage place until spring.

Happily, such deprivation is no longer necessary because bonsai enthusiasts have discovered a new challenge: growing subtropical trees and shrubs in containers *indoors*, at all seasons if desired.

The purpose of this article is to provide an introduction, rather than a detailed guide, to this new facet of the ancient art. Anyone experienced with hardy materials will find subtropicals a "breeze" to work with. They require a much shorter period to develop from potted tree to bonsai; in two years of training a specimen can be developed that would take four or more years with the use of hardy material. If one starts with nursery stock, it is not so risky to cut back large-sized plants, and because subtropicals have comparatively shallow root systems, they adapt well to shallow pot culture. Surface roots develop nicely because they are growing almost twelve months of the year; branches thicken and form fine twigs sooner because growing and pinching also are continuous.

As a group subtropical material is more colorful than hardy material. Many of the trees and shrubs produce showy blossoms, some blooming more than once a year, or even constantly. Among frequent bloomers are *Malpighia*, *Calliandra*, the jasmines, and *Serissa foetida*, known as the snow rose in the south.

In addition to flowering trees and shrubs, some also produce fruit that is a delight to see. Outstanding in this category are some of the citrus family; *Punica granatum nana*, bearing perfect miniature pomegranates; *Carissa grandiflora*, with edible



Malpighia puniceifolia nursery stock planted over the rock to show natural root growth. Photo. P Chvany.

fruits preceded by very fragrant blossoms; *Séverinia buxifolia*, which develops interesting black fruits; and *Triphasia triphylla*, offering scented white flowers followed by tiny, lime-shaped fruits.

Bark and leaf forms also are appealing in color and variety. Bark color ranges from almost white to almost black; texture can be spongy to “hard as nails.” In appearance bark can have a matte finish or a high shine, and its character is evident as soon as one year of growth in a seedling.

Melaleuca quinquenervia, cork tree or punk tree, has a bark so spongy that a flying golf ball will penetrate it an inch or more. The bark is matte creamy-beige and shaggy in appearance. Bright red-brown, shiny, and peeling a little in a very thin layer is the bark of the gumbo limbo, (*Bursera simaruba*); that of the *Malpighia coccigera* is the more familiar dark brown,



*Above: Bark, blossom, and leaves of Malpighia coccigera.
Right: Bark of Myrciaria cauliflora. Photos: P. Chvany.*



Punica granatum nana fruit. Photo: P. Chvany.



Malpighia coccigera — 8 inches tall, grown as a bonsai for fifteen years. Branch on right allowed to grow out of proportion to thicken as it replaces original one that was broken accidentally. Photo: P. Chvany.

— and lightly furrowed like our hardy trees. *Malpighia puniceifolia* has tiny white, birchlike horizontal markings that are interesting in a group planting. Little known because it is on the list of protected trees is holywood or lignum-vitae (*Guaiacum*), with bark that is almost white and rough in texture. The wood is so hard that it will sink in water. A tree with mottled bark is jaboticaba (*Myrciaria cauliflora*). Whereas the bark on a four-year-old *Stewartia* shows no variation of color, a four-year-old jaboticaba shows all the colors of an adult tree.

Some subtropicals have foliage as interesting as flowers. First among these is the *Malpighia coccigera* or Singapore holly which bears at the same time spiny, holly-shaped leaves and smooth-edged oval ones, both very shiny deep green. *Breynia distica*, called Jacob's coat, has leaves of many colors; they are mottled in shades of red, white and green. The leaf of *Hibiscus rosa-sinensis* 'Snow Queen' is light gray-green in the center with a white border tinged all around with pink. *Serissa foetida variegata* has tiny creamy-white rimmed, dark green leaves. From a distance it looks as if it were in bloom.

Pithecellobium brevifolium, commonly called ebony, has a light green compound leaf with leaflets so small that the tree has a feathery, fernlike appearance. *Acacia baileyana* has a



Bucida spinosa — 20 inches tall, 30 inches wide. Collected specimen grown in container for five years. Photo: P. Chvany.

similar leaf but it is bluish-green and silvery underneath. The foliage of *Sparmannia*, African hemp, is shaped like a maple leaf, but is fuzzy and yellow-green. Even some of the very large-leaved trees like *Grevillea* and *Jacaranda* can make acceptable bonsai because the leaves are deeply cut and light in feeling.

The same general rules for selecting hardy bonsai materials apply to the subtropicals. Choose plants with small leaves and short internodes. If possible, avoid grafted material because it usually has ugly swellings on the trunk. In the south one often finds nursery stock has been grafted on nematode resistant roots. For example, *Gardenia radicans* is grafted on *Gardenia jasminoides* stock; *Gardenia radicans* is very desirable for bonsai because it has small leaves and small flowers. If there is no choice and the graft is well done or can be concealed neatly, the design of the bonsai may not be ruined.

Since subtropicals are in bloom frequently, choose plants with small flowers so that the proportions of the bonsai will not

be destroyed. Hardy material blooms for such a short period that this selectivity is not always a requirement.

As with all the rules in bonsai, there are exceptions. Plants with compound leaves usually are avoided in hardy bonsai; in subtropical material there are too many to pass over. Therefore, one should simply choose the smallest leaved plants and work with them to see if bonsai techniques will reduce the leaf sufficiently to keep the overall tree in proportion. *Pithecellobium* and *Acacia*, for example, work well for small bonsai. *Grevillea* and *Jacaranda* would have to be large bonsai; be sure you have room for them.

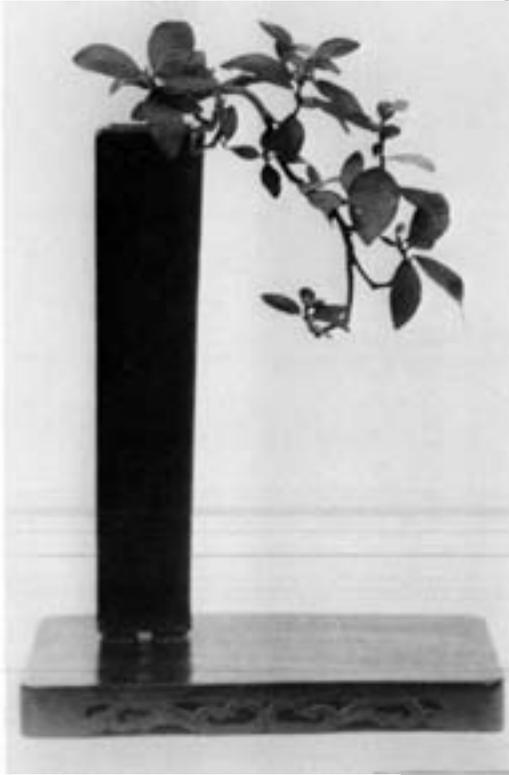
The greatest satisfaction comes from hunting subtropical bonsai material in the wild, which is considerably easier than hunting for hardy trees. The ground is never hard (except when the digging is in coral rock), and the weather is warm.

Lantana — collected plant. Photo: P. Chvany.





Calliandra haematocephala nana — nursery stock planted in cascade style and overpotted to allow growth to thicken trunk and branches. In the meanwhile the composition is pleasing; note blossoms. In this container four months. Photo: P. Chvany.



Trachelospermum —
12 inches overall;
grown seven years as
a bonsai; blooms well.
Photo: P. Chvany.

Carissa grandiflora from a cutting.
Grown as a mame over ten years.
Has never fruited or flowered al-
though its parent did. Foliage is
one-fifth normal size. Height is
8 inches. Photo: P. Chvany.



Learn the optimum time for collecting the material desired as well as what equipment will be needed. Keep the collected trees very moist until well-established to insure success. One should not bring material from the southern states to the north unless it has been inspected and approved by the U.S.D.A., by the way.

In the northeast, subtropical material is not so readily available, but prowling the nurseries and flower shops is half the fun for bonsai enthusiasts. With the increased interest in indoor gardening under lights, the variety in the commercial establishments is growing, and a wider selection is appearing.

There are a few plants that are especially amateur-resistant and therefore satisfactory as a beginner's bonsai. *Calliandra*, powder puff plant, has red feathery blossoms shaped like a semihemisphere. They burst forth from a bud shaped like a red raspberry, and the leaf is compound. The plant responds well to top and root pruning and will blossom sporadically all winter — the number of blossoms depending upon the amount of light. In a north window with no sun there will be one to six or more at a time; in an east or south window the bonsai will be covered with blooms.

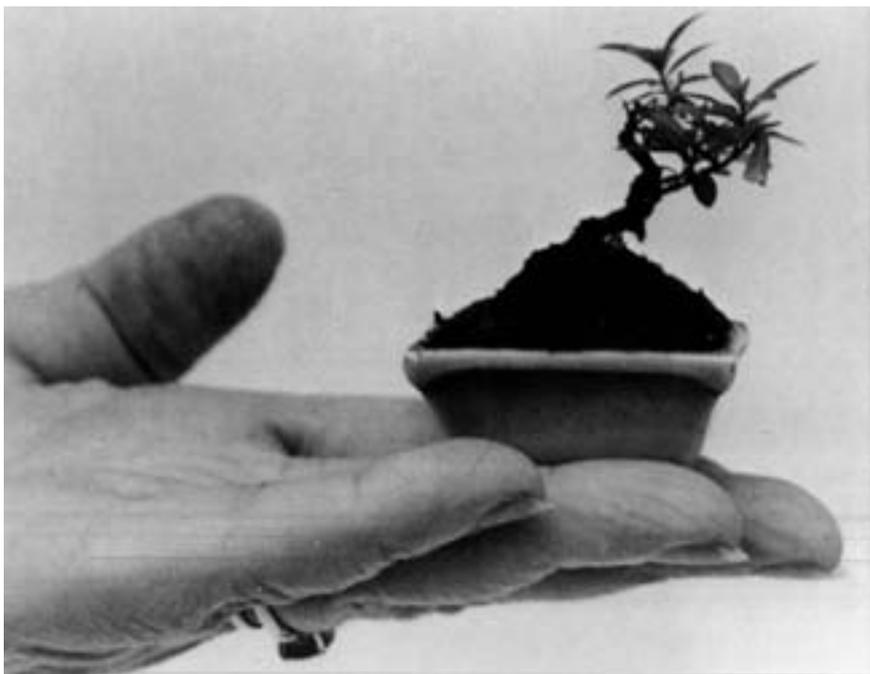
Exotic, modern in appearance, and altogether appealing is the sea grape, (*Coccoloba uvifera*). It is grown for its leaves, which are reddish in color when they first come out, later turning a deep green and then bright red and yellow before they drop. In the south the first crop of leaves is cut off to cause the second to be smaller; in New England the normal light in winter is weak and short in duration so that the leaves grow small and in good proportion. The sea grape is tolerant of poor light and dry soil.

The genus *Ficus* provides a whole range of rugged bonsai for beginners. The plants are fast growers and soon produce the effect of a mature tree. They are also tolerant of poor soil, poor light, and poor humidity.

Again, *Malpighia* must be mentioned — both *M. coccigera* and *M. puniceifolia*, the latter having a perseverance that is a comfort to the novice. Even when a specimen has been defoliated due to desiccation, placement in the shade and careful watering will induce new growth.

Nicodemia diversifolia with its oak-shaped leaves is easy to grow, but attention to its shaping must be given.

When explaining that bonsai are made from trees and shrubs one should also mention vines, for they, too, are woody-stemmed plants. Although many subtropical vines have blos-



Cuphea hyssopifolia — from a cutting planted in this container five years. Shown life-size. Photo. P. Chvany.

soms that are too large for bonsai (blossoms and fruit do not reduce in size even though the leaves do), there are many desirable materials from which interesting specimens can be made.

Among these are *Trachelospermum* (confederate jasmine) and *Clerodendron*, which have attractive growth patterns, foliage, and flowers; *Hedera helix* and *Ficus repens*, which make handsome mame (mah-may) bonsai — miniature trees not more than six inches overall. *Trachelospermum* grows slowly and has fragrant blooms occasionally; should its shape be neglected, it responds to a few snips or a severe pruning. *Hedera helix* has one major problem: the initial pruning. Once a plant is found with a sufficiently large trunk, it is very difficult to cut away the luxuriant long growth that such a specimen would have!

Spectacular in bloom is bougainvillea. It does require attention to its needs, however, and must be warm and dry to produce flowers.

In designing bonsai the ideal is to represent nature in miniature. Neither grotesque forms nor unnatural designs are acceptable to modern bonsai enthusiasts. (In ancient times creators of bonsai exaggerated the twisted trunks beyond those found in nature, and the practice was encouraged by the approval of a royal personage upon a visit to a nursery.) But styling a bonsai to the same form found in nature is not always practical. Formal upright style is represented by the araucarias which, although good house plants, are difficult to reproduce in miniature. *Taxodium distichum* will make a magnificent formal upright bonsai, but it requires a cooler winter than summer even though indoors. To have a bonsai of this design one may substitute compatible material that is easier to shape, such as *Eugenia myrtifolia*, *Ficus neriifolia regularis*, or *Ulmus parvifolia*.

Informal upright and slanting styles are most often seen in nature and are the easiest to duplicate as bonsai. Under slanting style is windswept style and one can have fun with it in deciding "how the wind is blowing" and which way the tree will lean. If the "wind" gets out of hand the result may be a semi-cascade style. Cascade style trees do not grow in nature in the south. The closest to cascade would be a vine that has traveled as far upward as it can and then begins to grow downward. Plants other than vines that lend themselves to cascade styles are *Calliandra*, *Carissa*, *Gardenia*, *Lantana*, *Serissa*, and juniper.

Driftwood style is found mostly along the shores where trees have survived the struggle against storms; inland, with few exceptions, they decay and soon disappear if damaged. *Conocarpus erectus*, *Jacquinia keyensis* and *Taxodium distichum* are good subjects for this style, for the wood is slow to deteriorate and "silvers" nicely.

Spring is always the best time to pot up hardy bonsai. Sub-tropicals (with exceptions) can be started successfully throughout the year at the grower's convenience. Naturally, heavy pruning of the top must be done when the roots are severely cut back; after that, light pruning and pinching of branches and twigs can take place at any time, as can wiring. (It may be prudent to paper-tape the wire, for many subtropical plants have tender bark.) Established subtropical bonsai have two periods of strong growth: spring and fall. Reshaping and heavy top pruning should be done before these periods.

Style dictates the shape and depth of the container used. Shallow round, oval, or rectangular trays are most appropriate since they are complementary to the informal upright and

slanting styles of subtropicals. Cascade and semicascade styles, of course, require a deep container for balance.

Even though the tray is shallow, a free-draining soil is very important. Subtropical bonsai, with rare exceptions, prefer a light humus and sand-soil mixture slightly acid to neutral. Watering is simplified under these conditions; generally, a heavy application once a day should suffice. In the dark winter months as the light and temperature decrease, reduce watering; except for the mames it is even possible to skip a day.

With heavy watering of a small amount of soil, a regular program of fertilization is advisable to replace the nutrients that have leached out. Frequent but VERY dilute applications of an all-purpose product are recommended.



Ficus neriifolia regularis — five-tree grove planted six years ago from nursery stock. Height is 22 inches. Photo: P. Chvany.



Ficus benjamina — from nursery stock grown as a bonsai fifteen years. Height is 28 inches. Note surface roots. Photo: P. Chvany.



Above: Ficus neriifolia regularis. Cuttings newly planted to make a mame group planting.

Below: Pinus halepensis. Both plants grown from seed six years ago; the right one as a bonsai for four years. Photos: P. Chvany.



The familiar indoor pests — mealy bug, scale, spider mites, etc. — will attack subtropical bonsai, but unless the air is very still and very hot, it is possible for the plants to go through the winter without trouble. If infestations do occur, they may be dealt with in the usual manner by spraying with insecticides. This is not always practical in a house or small apartment, however. A simple solution is to use a ½-inch-wide soft paint brush dipped in alcohol to brush the entire plant trunk, branches and both sides of the leaves; then rinse off under a spray of water. (The surface of the soil should be covered with plastic during this operation.) An alternative is to wash the plant with soapy water. In case of heavy infestation, both treatments can be used consecutively.

It is possible to leave these small gems of horticulture untended for a few days if precautions are taken to prevent desiccation. The easiest procedure is to water and drain each bonsai thoroughly and enclose it in a plastic bag placed out of the sun; that will keep it from three to five days. Or water the bonsai thoroughly and set it in a tray filled with ½ to 1 inch of water. The plant will be sitting in it for only a day; in three days the water will have evaporated and the bonsai will be drying. Alternatively, if the thermostat is lowered and the shades drawn, the plant will not use much water and can wait forty-eight hours for its next application.

A way to determine if there is sufficient light to grow bonsai indoors is to photograph the growing area with a simple Instamatic or similar camera, and film normally used for outdoor photography. If there is no image when the film is developed, there is not enough light; conversely, the better the photograph, the better the growing conditions.

Small subtropical bonsai — those about 14 inches or less — grow well under fluorescent lights. Taller bonsai require more complicated light systems to assure good light on the lower branches. A combination of good natural light, plus artificial light to lengthen the day, has proved to be most productive of good plant health and blossom.

A dear friend and accomplished horticulturist recently said to me, "I've always considered bonsai the chamber music of horticulture and up to now I've not been ready to get into that." When one finds one's self "into that," the return is immeasurable in new interests, pleasurable activity, visual delights, and satisfaction to the soul.

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Top: Jacquinia keyensis — collected in 1972. Has very brittle branches; still breaking with leaves from wood that seemed dead.

Below: Ficus aurea — 3½ inches high planted in the rock two years.

Photos: Deborah Thompson



Subtropical Plants Suitable for Indoor Bonsai

These are plants with which I have had from two to fifteen years of experience. The list of possible subtropical material is almost endless.

- 1 — do very well in normal house conditions
 - 2 — adapt easily
 - 3 — need careful attention
 - 4 — difficult requirements
- 4 *Acacia baileyana* (golden mimosa) — wants cool growing temperatures
 - 3 *Acacia farnesiana* — will adapt to warm temperatures
 - 3 *Bougainvillea* spp. — will drop leaves if too wet or too cold
 - 2 *Breynia disticia* var. *roseopicta* (Jacob's coat) — needs sun for best leaf coloration
 - 2 *Bucida spinosa* (black olive) — water well, root prune quickly and lightly
 - 2 *Buxus japonica* (boxwood) — keep in cool spot, root prune lightly
 - 2 *Buxus microphylla nana* — do not overwater or overfertilize
 - 1 *Calliandra haematocephala* and *C. h. nana* (powder puff plant) leaves fold at night
 - 3 *Camellia sasanqua* — depending on variety blooms Oct. to Feb. in cool temperatures
 - 2 *Carissa grandiflora* (Natal plum) — resents heavy root pruning
 - 3 *Citrus* spp. (calamondin, marco orange, meyer lemon, grapefruit)
 - 1 *Clerodendron thomsonae* (glorybower) — keep well watered
 - 1 *Coccoloba uvifera* (sea grape) — do not overwater or overfertilize, likes alkaline soil
 - 1 *Conocarpus erectus* (buttonwood) — water well, tend to pinching
 - 2 *Cuphea hyssopifolia* — needs sun for bloom
 - 1 *Eugenia myrtifolia* (brush cherry) — grows quickly, easy to shape
 - 1 *Eugenia uniflora* — full sun for edible fruit
 - 3 *Eurya japonica* — keep warm and well-drained
 - 1 *Ficus aurea* (strangler fig) — tolerant of heat and dryness, leaf reduces drastically
 - 1 *Ficus benjamina* (weeping fig) — will develop aerial roots
 - 1 *Ficus diversifolia* (mistletoe fig)
 - 1 *Ficus nerifolia regularis* — responds well to heavy pruning of top
 - 1 *Ficus pumila minima* — very slow but worthwhile
 - 1 *Ficus retusa nitida* — tolerant of poor light
 - 3 *Galphimia gracilis* — shape by pruning; brittle
 - 2 *Gardenia jasminoides nana* — uniform temperature and moisture
 - 2 *Gardenia radicans* — will grow in window without sun
 - 1 *Guaiacum officinale* (lignum vitae) — grow warm and in full sun for truly blue flowers
 - 1 *Hedera helix* (English ivy)
 - 2 *Hibiscus rosa-sinensis* 'Snow Queen' — do not overwater; full sun for best leaf color

- 2 *Ilex vomitoria* (Yaupon holly) — wire carefully; prune roots lightly; pot up quickly
- 2 *Ixora* spp. — acid soil, tolerant of poor light but needs sun for full bloom
- 3 *Jacaranda* spp. — difficult to achieve lavender-blue flowers on terminals
- 3 *Jacquinia keyensis* (joewood) — collected only. Keep roots damp, pot quickly
- 2 *Jasminum dichotomum* (pinwheel jasmine) — stands pruning well
- 2 *Jasminum pubescens* (star jasmine) — keep warm, moist, and in good light
- 3 *Juniperus chinensis sargentii* — best in cool temperatures, pinch carefully
- 2 *Juniperus procumbens nana* — stands heavy pruning; keep foliage thinned out
- 3 *Lagerstroemia indica* (crapemyrtle) — keep moist and in good light for bloom. Adapts to any style.
- 2 *Lantana* spp. — brittle to wire, easy to shape by pinching
- 4 *Leptospermum scoparium* (tea tree) — resents heavy root pruning
- 2 *Ligustrum japonicum* (Japanese privet) — wants neutral to alkaline soil; easy to shape
- 1 *Malpighia coccigera* (Singapore holly) — burns in sun; do not keep wet
- 1 *Malpighia puniceifolia* — when a twig breaks it heals and grows if not severed
- 2 *Melaleuca quinquenervia* (cork tree) — stands heavy top and root pruning
- 2 *Myrciaria cauliflora* (jaboticaba) — fertilize carefully to prevent yellow leaves; needs sun for its edible fruit
- 2 *Olea europaea* (olive) — tolerant of heat and dryness
- 2 *Pinus elliottii* (slash pine) — needles do reduce; start with young plant
- 1 *Pinus halepensis* (Aleppo pine) — tolerant of heat and dryness; do not repot often
- 1 *Pithecellobium brevifolium* (ebony) — best shaped by pruning
- 2 *Pittosporum tobira* — best shaped by pruning because of growth pattern
- 2 *Podocarpus macrophylla* 'Maki' (southern yew) — root prune carefully; responds well to top pruning
- 1 *Punica granatum nana* (dwarf pomegranate) — tend to pinching
- 1 *Pyracantha angustifolia* — likes alkaline soil; tolerant of dryness
- 4 *Quercus nigra* — same as *Q. virginiana*, water well
- 4 *Quercus virginiana* (live oak) — start with young plant; do not repot often, and root prune very lightly
- 2 *Raphiolepis indica* (Indian hawthorn) — slow grower; brittle to wire
- 3 *Rhododendron indicum* (azalea) — 'Coral Bells' (Kurume) an excellent variety
- 2 *Serissa foetida* (snow rose) — tend to pinching, do not overfertilize

- 2 *Serissa foetida variegata* — tolerant of poor light but becomes leggy if grown too dark; tend to pinching for shape
- 1 *Severinia buxifolia* — very brittle to wire
- 1 *Sparmannia africana* (African hemp) — grows quickly, shapes easily by pinching
- 4 *Taxodium distichum* (bald cypress) — needs a cool and dry period to lose foliage, then plenty of water to grow
- 1 *Trachelospermum jasminoides* (confederate jasmine) — pinch out vining growth
- 1 *Triphasia triphylla* (limeberry) — keep warm, well watered; watch for wire cuts
- 2 *Ulmus parvifolia sempervirens* (evergreen or Chinese elm) — good shallow root system
- 1 *Vitis munsoniana* (bird grape) — fast grower, tolerant of poor light and heat



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Pithecellobium brevifolium — 9 inches. Grown from a seedling and wired to adjust branch placement. Photo: P. Chvany.