BONSAI CHRYSANTHEMUMS
By Ted King

This relatively new form of bonsai art has attracted much interest from the bonsai hobbyist as well as the chrysanthemum fancier. Perhaps an important factor in the popularity of the bonsai chrysanthemum is the ability to grow and train in the period of less than a year, a perfect replica of an aged bonsai. Thus, it is possible in several sessions of trial and error to achieve much more experience and skill than is possible in working with slower-growing traditional bonsai types. Since it is only my intention in this brief article to give the basic steps in growing and training, I would suggest and highly recommend a very important reference book, and about the only one in English that treats the subject at length: The Art of the Chrysanthemum, by Tameji Nakajima, Harper & Row, 1965. This book is currently out of print but can be obtained from most larger libraries as well as online through the Internet via eBay or Amazon. If the book by Nakajima is not available, we would suggest reading any of a number of good books on bonsai culture for information on traditional bonsai styles and training procedures.

In many respects, growing the bonsai chrysanthemum follows the general culture techniques which apply: rooting of cuttings, pinching, feeding, and disbudding. However, training is a special technique requiring study and practice.

Selection of Cultivars: It is very important that proper selection of good bonsai type be given major importance. Your bonsai specimen should have the following characteristics: a short, stocky growth habit; freely branching; short internodes; vigorous, heavy root system; small foliage and very small, long-lasting flowers on short stem; and the ability to continue new growth on old wood as well as disease resistance. A large number of the failures I have observed are mostly due to selection of poor bonsai types that were not well suited to dwarfing. We are fortunate in that we now have the best of bonsai types recently imported from Japan. (Note: Importing is no longer allowed in the USA.) Most of these retain their Japanese names. A list is given at the end of this article, including suppliers.

Cuttings: A very early start is of prime importance in growing your bonsai chrysanthemum. It is this early start that helps to achieve the large aged and tapered appearance to the trunk. It is a distinct advantage to start a number if plants for success as not all cuttings will develop in the same way or favor the intended style. Cuttings or divisions started in September or October is not too soon and is the time recommended by Nakajima. However, some very good specimens have been grown from cuttings rooted in the period from January to early March. Divisions are not as desirable as cuttings as these have the tendency to produce more stolon growth than the cutting, which necessitates constant removal and is not desired. Newly rooted cuttings should be planted in no larger than 4" standard clay pots and allowed to remain there until well established and roots begin to show at the drain holes. Do not plant initially into bonsai pots, but move the specimen along to larger pots, saving the show container until early fall. A good basic potting mix for your bonsai is: 5 parts leaf mold or well-rotted compost, 3 parts light clay soil, 1 part sharp river sand, 1 part of either fish meal, cottonseed meal or alfalfa meal, and 1 part charcoal. This mixture can be used for all repotting except wintering over, when the clay soil should be left out for better drainage. Special care should be given to the circular placement of the main roots at first transplanting so that roots radiate in all directions from the center.
Cuttings or divisions that are started in the fall will seldom live over on the current season’s growth. It is recommended that shortly after or during the late bloom stage, the young bonsai plant be slowly cut back to force new growth at or near the base of the plant. This new growth which is supported by a well-developed root system will achieve the largest and thickest lower stem, which is very important in giving the aged appearance to your bonsai. Select the best and most vigorous new growth and remove all other shoots, buds or stolon growth that appear. The new growth you select will be trained to the desired stem style. If you are starting your bonsai from a rooted cutting from January to March, no cutting back is done and new growth is trained as it occurs, removing any unwanted buds or stolons as they appear.

In order to stimulate early growth during the cool months, the use of a heating mat beneath your plant will greatly increase growth. Also, giving your plants four hours of extra light at night will increase growth and prevent bud development which often occurs in old wood types. This is accomplished by placing a 60-watt light about 3’ above your plants from January through April.

**Select Style:** Of primary importance early in the training period is the selection of the style of bonsai you intend to create. It is best to try to follow a drawing or a picture of the particular style of the proposed creation. A properly grown bonsai of real character and beauty is not a matter of chance but the result of carefully following very specific cultural guidelines. Illustrations at the end of this article give some idea of the many traditional styles. These should resemble those shapes found in nature such as trees clinging to rocky outcrops. However, a bonsai may be trained to any style resembling a tree or shrub. Keep in mind that a well-trained chrysanthemum bonsai is not a result of nature but reflects the amount of effort and attention provided by the grower.

**Repotting:** Repotting your bonsai will normally occur at about 45-day periods. Indications of a need for repotting are generally the appearance of roots at the drainage holes. It is necessary in areas of warm spring temperatures to prune about one-third of the lower root ball when repotting. This slows down plant activity and helps to prevent overgrowing. This root pruning may be done several times during the spring and summer.

**Pinching:** This is the basic tool the bonsai grower uses in reduction of plant size and proper placement of the desired branches. New buds from the leaf axils are produced by this pinching practice. Good branch structure and placement in the lower area of the plant is needed and necessitates an early pinch, generally around the middle of March or mid-April, depending on how early your plant was started, this basic pinch is repeated about every 25 days thereafter.

The bonsai chrysanthemum is a prolific grower, and we encourage this growth to achieve the necessary thickening of the stems. There are times, however, when your bonsai will resemble a bush and severe pruning is necessary to regain the planned style. Do not be timid about pinching and trimming as new growth quickly develops where pinching and cutting are done. This repeated cutting back and pinching is very important to achieve style and character.

**Leaf Trimming:** It is necessary during the spring and summer growing seasons to remove the larger leaves from the inner portions of the plant. These leaves tend to give too much shade to
the newly developing small branches, causing them to become elongated, a highly undesirable effect. Leaf pruning also helps to slow down vegetative growth in the area in which they are removed.

**Fertilizing:** Fertilizing requirements for the bonsai generally follow the same procedures as for all chrysanthemums. Fertilizer requirements are very small in the fall and winter months, and large amounts of nitrates for the newly started plant can injure the plant. However, as the winter warms and vigorous growth begins, a regular schedule of liquid feeding should be established. Plants in small pots are subject to excessive leaching, so most of the original organic materials incorporated in the potting mix is soon depleted. A once-per-week application of very diluted fertilizer, such as fish emulsion, is usually adequate. The object should be to maintain good, dark green color and steady, healthy growth without creating a burst of growth from heavier feedings. Discontinue feeding for 7 to 10 days following repotting and pinching. All fertilizing is stopped with the appearance of color in the flower buds.

**Pest Control:** Fortunately, the bonsai chrysanthemum is less attractive to insects and disease than most chrysanthemums. However, under certain climatic and cultural conditions, severe problems may occur. Mildew—keep the foliage dry, especially during the night. Spray with an organic or inorganic fungicide of choice. Aphids and Worms—Spray with organic or inorganic pesticide of choice. Spider Mites—Spray with an organic or chemical control for spider mites. Never spray when temperatures are high or when the plant is on the dry side or spotting and burning will appear on the foliage.

**Exposing Roots:** The exposed root system is an important feature of the bonsai. If the plant has been started on a raised mound and roots evenly spaced at first potting, then a gradual washing will expose the larger roots. Small hair roots should be gradually removed until only the larger roots remain. In order to expose more of the root system as in rocks or driftwood planting, a different technique is used. A well-developed cutting established for at least four months is removed from its pot and all the soil washed from the root ball. The roots are then trimmed so that only the main larger roots are left. Don’t hesitate to remove up to 85 percent of the root system as this also slows the new vegetative growth. The remaining larger roots are then draped in as natural a manner as possible over your carefully selected rock, stump or driftwood, inserting the root ends in the moist potting mix at the base of the wood or rock. Then the exposed roots are covered with a layer of moist sphagnum moss. This may be tied around with a small piece of plastic to further reduce evaporation. When the plant looks well established, usually in three to four weeks, the moss can be gradually removed. If your specimen is to be grown as above, with exposed roots over wood or rock, then very careful selection of these accessories is important as these add much to the charm of your display. Pumice and lava rock are often used as well as sandstone. These can be cut and formed to help support the plant and make natural-looking crevices along which the roots can be trained.

**Training Techniques:** Since the style of the various types are so varied, the techniques differ. Only a few basic ideas can be given here.

As soon as lateral growth has reached 3” or 4”, usually in early April or May, initial training should be started. At this time, selection of the main lower branches should be made and wired to the desired position. Copper wire of up to 12 gauge to 18 gauge is used in a coiling method.
around the branches and main stem to hold the proper shape. Use the smaller 18 gauge for branches and the heavier 14 gauge to 12 gauge for the main stem. Always coil the wire in the direction of the desired bend. Do not leave coiled wire on for longer than necessary or coiling scars will show on the thickening stems. Generally never leave on for more than a month.

An easier method of training the main trunk is to form a piece of wire, 12 gauge or heavier, into the style you intend. This is inserted into the soil at the base of the stem and new growth tied to it with twist-ties as it grows.

Be careful about severe bends as the stem becomes very brittle as it hardens. It is important to do all major forming of the main and secondary branches you intend to keep while your plant is relatively soft and supple.

First, the main trunk is wired in the desired style, remembering that the plant will grow prolifically in the coming months. Next, all main side branches that are saved are wired and shaped. If a side branch at the desired place is missing, a new bud can usually be cultivated into a branch. In one or two months, a bud can become a thick branch. Also useful are small weights hung on the developing branches and wire hooks inserted in the soil and used to bring the branches down. To control the ultimate height of the plant, the growing tip of the trunk and main branches must be periodically pinched, removing about 1/2” of the tip. The end bud that then develops directly below the pinch is then trained in such a manner as to continue the extension of the trunk and main branches. This repeated pinching will also produce a rapid tapering to the lower branches and trunk of the finished bonsai.

The retaining of several lower branches close to the base of the plant on a temporary basis will also increase the diameter and taper of the lower trunk. These extra branches can be pinned down out of the way to be removed later as the form develops. Do not allow these extra stems to remain later than mid-June as time is necessary to heal pruning scars.

One of the most common faults observed in the training of the bonsai is the tendency of the branches to elongate and grow too rapidly, especially during the latter part of the summer season. This causes the specimen to be top-heavy and unbalanced with long internodes. There are a number of reasons for this, and usually several are involved. The cultivar may not be naturally dwarf enough for a bonsai cultivar. Too much shade—move to a sunnier location. Over fertilization—give enough to maintain steady growth and good color. Wetting of the leaves will cause more stretching of the new growth; water only the base of the plant; keep the leaves dry. This is especially important during the bud development period to prevent elongation of the pedicel supporting the blooms. Your bonsai will need severe pruning and pinching at least every month, each time cutting back most new growth retaining only the largest primary trained branches. Our experience indicates an overall pruning removing most of the larger leaves and as much as one-half to two-thirds of the new growth can be done as late as the end of July. Pinching and pruning must continue until bloom time to create the desired style. Frequent attention to form your bonsai during August and September will determine how well you have styled your bonsai at bloom time. At this time, allow only the new growth to develop that will be used in your final training.
**Growth Retardants:** We recommend use of growth retardant B-Nine at least once a month during the winter and spring months and as often as every three weeks during the summer and early fall. This chemical will thicken the stems while slowing the elongation and is very helpful in shortening the pedicels supporting the blooms. Use the standard strength of .25 or two tablespoons per gallon of spray solution.

**The Reserve Pinch:** This is a very important step to shortening flower stems and preventing branch elongation. This also will produce more flower stems from which a final selection can be made. Mid-August is reserve pinch time for November 1 blooms. This is a soft pinch given to all the growing tips. Unwanted twigs are not required and resulting from this pinch are thinned out as they occur.

**Pinching for Simultaneous Bloom:** The bonsai chrysanthemum, like the cascade, is judged for uniformity of the bloom development and ideally should be brought into bloom so that all buds are in the same stage of bloom at one time. Since it is natural for all chrysanthemums to bloom first at the terminal ends of the topmost or leading growth, it is necessary to carry out a special pinch schedule. This schedule for November 1 blooms starts with September 6, when all secondary growth emanating from the base one-third of the main stem is pinched back to two leaves. September 9, pinch back to two leaves the middle third of the secondary branches from the center of the plant. September 13, pinch back to two leaves all remaining terminal branches, including the top of the plant. Keep your plant on the dry side at this time and restrict watering to a minimum. Keep the foliage dry to prevent mildew, and covering plants at night is advisable. Avoid shading and give as much sun as possible to prevent elongation of new flower stems. Watch for unwanted growth and prune out as soon as new twigs develop.

**Disbudding:** Terminal bud clusters will appear and it must be remembered that only one bud to each cluster is retained. Generally, the centermost bud is selected. However, buds selected should be of the same degree of maturity so that they will bloom at the same time. If the plant has not been pinched to promote uniform bud development, it may be necessary to select several types of buds: center lead buds on the last bud clusters to develop. This will result in even more bloom. Spare buds should be retained intentionally in case damage occurs to the selected buds. Blooms should be spaced out over the entire plant as a profusely blooming bonsai is bad form.

**Potting for Shows:** As your bonsai becomes covered with well-developed flower buds, it is ready for the show pot. Avoid potting during bud initiation as this will severely check the growth and delay the bloom date. Choose your display container with careful consideration as to shape, color and harmony. Much depends on your choice of a container that will blend with your chosen style. The wrong shape can spoil an otherwise good exhibit. Glazed and highly colored containers are seldom used. The finishing touch to your bonsai is the transplanting of moss to the surface of your specimen. Moss is not used prior to this time as it absorbs too much of the nutrients intended for the plant. Moss of only the finest texture is used. This can be gathered ahead of time and stored in a protected place where it can be watered. Moss should be carefully worked under the exposed roots to cover the surface.

**Overwintering Old Wood Styles:** The chrysanthemum’s normal growth cycle is from seed, cutting or division to bloom in one year, after which the old stem dies back and new growth
starts again from the ground or the base of the old stem. Most bonsai cultivars, however, have been bred for their ability to be partially deciduous and will, in some cases, form new growth from advantageous buds on the portions of the largest part of the main stem. In order to promote new growth on the old wood, blossoms must be removed completely as soon as possible. Experiments have shown that spent blooms produce a toxin that kills back the stems. Prune back all secondary branches to just a few leaves in late November and place in a protected sunny place where it will not be subject to freezing or any extremes in temperature and weight. Prevent any drying out, but do not overwater and do not feed.

There is no assurance new growth will occur on the old wood as factors such as choice of cultivar, natural vigor, health and winter care are involved. It is suggested that unless you have achieved specifically good form with the main stem (as that is about all I can retain from the second year), you should plan to start a new bonsai creation each year. The main reason for this is the uncertainty of getting the necessary new growth and if the new season’s growth will occur in the proper places to continue good bonsai form.

If your trained bonsai completely dies back, there should be an abundance of new stolon growth at the base which can be removed to start a new bonsai creation for the next season or, better, root cuttings from the new growth.

There is a real attachment to these old wood types, and each year they become more like old trees. We have maintained one specimen at the nursery for 16 years.

**Judging:** Using the excellent text, *The Art of the Chrysanthemum* by Nakajima as a guide, I will attempt to describe the important points in judging the bonsai chrysanthemum. Since styling takes such a wide latitude of form, it is only possible to list the basic points that will apply to most specimens. These structural parts treated separately are roots, trunk, branch, leaf and bloom.

**ROOT:** Root should extend to all quadrants of the base of the plant; should be uniform size and few in number and thickest at the point where they grow from the base of the plant and have a definite taper.

**TRUNK:** Should be very thick at the base and show a definite taper. Scars caused by poor training techniques should not be visible. Because of the many styles, trunks will vary greatly. However, it should be possible to associate the trunk with one of the traditional forms.

**BRANCH:** Branches should not overlap or be trained directly forward or directly to the rear but, rather, on an angle. The first branch is seldom trained to the rear and normally the first and third branches are trained to the forward position of the plant while the second is trained to the rear quadrant. Branch placement should be such that the lower trunk together with the basal portion of the three lowest primary branches are visible. Spacing between branches should be progressively smaller and should form a ball-like crown at the top—bonsai cascades excepted.
LEAF: The development of small leaves at the upper part of the plant is desirable to give proper balance. Any large leaves should be removed as well as any damage, yellowed or dried leaves. As with all potted specimens, foliage should be clean.

BLOOM: Bloom of flowers must be small—1/2” to 1-1/2” in diameter. The smaller blooms are preferred. Stems supporting the flowers should be very short. Flowers should be on terminals and borne singly. Sprays or clusters of buds are not used. This will require some disbudding. An overabundance of bloom is not good form. Single flowers carefully spaced over the plant are preferred. Flowers past their best or not quite ready to bloom should be carefully removed to create an even balance. Although the blooms are important, they are less so than the general form and style of the specimen. Quite often, a specimen is shown when blooms are not completely open or past their best. This, of course, will count against it but should not disqualify.

Consider the overall appearance of the specimen. Are the proportions appealing to the eye? Does it resemble a miniature found in nature? A good bonsai is not grotesque but should resemble nature as closely as possible.

CONTAINERS: The pot or container used should be carefully selected to blend and show the specimen to the best possible advantage. Glazed or brightly painted pots should not be used, nor should the pot distract from the beauty of the specimen.

DRIFTWOOD STYLES: Bonsai trained to driftwood should have the appearance of growing from the driftwood. All supports and wires not necessary for support should be removed before showing.

**Suggested Cultivars for Bonsai Training:** Is the cultivar grown best adapted to bonsai culture? Does it have compactness? Short internodes? Good branching habits and flexible stems? Abundance of florescence on short stems? The following excellent cultivars can be obtained from the following sources:

* Kings Mums at [www.kingsmums.com](http://www.kingsmums.com)
** Capobianco Creations at [www.capocreations2.wixsite.com](http://www.capocreations2.wixsite.com)

**Benikagami, 7C**
A small, red single with attractive yellow halo around yellow center. Best for cascading bonsai or larger specimens. Bloom date: October 18 to October 24.

**Chidori, 7C**
Very small white single flowers produced on a dwarf grower that develops heavy trunk and many branches. Strong surface roots and trunk, easy to bend. Good for all styles of bonsai. Bloom date: October 16 to October 26.

**Crystal Falls, 8C**
A white anemone with a natural cascading habit. Easily trained to cascade or semi-cascading bonsai style. Good hanging basket also. Bloom date: October 26 to November 5.
**Debbie Simon, 8C** *(Capobianco Introduction)* **

**Estelle Abrams, 8C** *(Capobianco Introduction)* **
Good orange-colored ray petals, orange and yellow anemone blooms. Excellent form and strong growth. Highly recommended for all styles of bonsai. Bloom date: October 26 to November 10.

**Hatsune, 8C** */**
A small, solid yellow anemone. Develops many branches, good trunk and strong surface roots. Good for miniature style or hanging baskets. Bloom date: October 16 to October 25.

**Huru no Michi, 7C** **
A small yellow single good for all styles. Strong stem and good branch structure. Bloom date: October 28 to November 3.

**Joan Corbisiero, 8C** *(Capobianco Introduction)* **
Strong grower with white anemone blooms. Good surface roots and sturdy stems and branches. Best for upright or semi-upright bonsai styles. Good for old-wood bonsai. Bloom date: October 20 to November 1.

**Kotoi No Kaori, 8C** */**
Golden bronze anemone with red ray florets. Very free-flowering and adaptable to most any style of bonsai or miniature tree. Also good hanging basket type. Bloom date: October 22 to November 10.

**Seigi Dwarf, 8C** **

**Sengokubume, 8C** **
A small white anemone with pale yellow cushion, very dwarf and produces heavy stems. Good for old-wood bonsai. Bloom date: October 29 to November 10.

**Tsukomo/Sukomo, 8C** **
Small, unusual orchid pink anemone that turns almost to white as it opens. Develops large trunk and strong surface roots. Fine for low-growing containers. Very easy to train to most any style. Bloom date: October 18 to October 28.

**Yukari, 7C** */**
These are but a few of the many styles of Bonsai styles. There are many others to study and learn about. Growing styles continue to evolve and change. There are many books and websites available for the beginner and advanced grower to learn from.

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