

POTOMAC
BONSAI
ASSOCIATION

Newsletter

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PINE SEED

by Joseph Burke

This is the second in a series of articles by Joseph Burke who is one of the country's leading propagators of pine for bonsai. It treats the other side of the coin so to speak. Some people feel that the quickest way to obtain a bonsai is to collect a tree in the wild that has been transformed by the forces of nature into an almost finished product. The other approach is to grow the tree from seed, thereby developing it as it grows into what you want in a bonsai. The following article covers the aspects of growing pine from seed, but a number of the points made, are applicable to growing other trees from seed. Thanks again, goes to Joseph Burke for permitting PBA to reprint the enclosed article and to Dave Dambowie for directing us to it.

PINE SEED

Long ago, I walked the ridge area looking for some hundred year old pine trees about two feet high with a thick



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trunk and good branches and roots. I wanted to find a real time saver, an instant Bonsai. I looked for three days and almost found one that someone heard about. But, I never did find one, and I never saved any time, so I planted some seed. In fact, each year the time I can't save ridge-walking, I spend seed planting. In what seemed like no time, I had a few twenty year old pine trees which looked like a youthful image of the hundred year old trees I never found.

I planted the seed in raised beds, framed by one by twelve boards. The frame is filled with a mix - half coarse sand and half coarse peat moss - to within one inch of the top of the frame. The top inch is added in three operations. First, I spread a half inch of sand, then the seed is sown and then the seed is covered with a half inch of sand, which tops off the frame. This arrangement gives excellent drainage which is one requisite for the successful germination and growth of any conifer seed.

The emerging seedlings do not like full sun, so shade slats are staked about a foot above the frame. A seed frame is never built under a tree, because the rain run-off carries bugs and fungus into the seedbed. Bugs are bad, they eat seedlings, but fungus is worse.

Fungus decimates a seedbed, killing the seedlings before they break through the soil surface, and after break through, until the seedling stems harden off in late summer. As the Mama tree said to the seed, "It's not what you see that kills you, it's what you can't see, namely fungus."

Fungus control is the major problem in growing from seed. Good drainage and good ventilation are always necessary, insect control is necessary, but the real killer, the prime causative agent of "damp-off", is fungus.

Topping off the seedbed with sand helps to inhibit fungus attacks on the emerging seedlings because there is no soil splash. Raindrops splash muddy soil up around the seedling stems. The wet mud, coating the soft stem tissue is warm and moist, a natural habitat for fungus. Sand does not build up a rain splash coating on emerging seedling stems, and therefore, using sand as seedbed topping reduces the possibility of fungus infection.

Decide what your special seedbed needs are and set up a continuing "prevention program" to control insects and disease. The exact time to spray insecticides, specific dates selected to coincide with "hatch time", can be obtained each year from your County Agricultural Agent. The proper time to use insecticides is when the bugs are too small to have big appetites.

Be very wary of all chemicals used in horticulture: spray insecticides, dust insecticides, dust or spray fungicide, even rooting hormone. Wear rubber gloves and for sprays and dusts, use a respirator. There have been too many mysterious deaths and unexplained high cancer rates occurring in the relatively small group of people who use these chemicals.

The seedbed is dusted with Captan Fungicide when the seed is sown. I dust the bed lightly a month or so before emergence and again when the seedlings begin to emerge. Most people have a strong impulse to water emerging conifer seedlings. Stifle that impulse. If it comes up real dry at the end of June, dig your finger into the seedbed. The soil should be dry two inches down before watering. If you are convinced that it's cruelty to seedlings not to water, first dust lightly with fungicide, then using a water breaker, soak the bed; then again dust lightly with fungicide.

Watering is done in the morning on a windy day. The wind and sun help to dry out the soil surface under the slats. Don't remove the slats to help the drying, the seedlings will sun scorch. However, be aware that moisture has a direct

correlation to most plant disease problems. Seedlings thrive on neglect and die from tender loving care, so act casual, be firm, don't overwater.

People have a strong impulse to feed emerging seedlings. Double stifle that impulse. The best fertilizer for seedlings is the shadow of the gardener. In the early fall, if seedling color gets pale, feed lightly with a plant food which will not burn tender seedling tissue.

Incidentally, I try to follow nature in planting seeds. If the tree drops seed in May, I plant in May. If the seed drop is in September, I plant in September. For proper spring germination, some seeds need a warm moist stratification period preceding the cold stratification of winter. If it's necessary to hold some seeds, they should be put into plastic bags and stored in the refrigerator. Seed purchased from commercial sources is stored for extended periods in refrigerators, the cold temperature slows the metabolic process, extending the viability.

If possible, collect your own seed from a local source with a proven viability. Usually a group of trees of the same kind is a better seed source than a single tree standing alone; the more dense pollen drift in the group results in higher seed viability. Some seeds wait two years before germinating so if you're an impatient type person and don't like waiting, plant something else.

I collect the pine cones just before the seed falls, which means just as the large cone scales start to open. The cones are collected in basket or burlap bags. Don't use plastic bags, they get too hot and sweat the cones, damaging the seed. The collected cones are spread out on the driveway and sprayed with insecticide and fungicide which signals the start of the departing insect parade. The cones are then put into the burlap bag and stored in a cool, well ventilated place for a week or so. When the bag is dumped, most of the seed falls loose. Tap the cones to jar the clinging seed loose. Interestingly, the most viable seed comes from the middle area of the cone.

I keep a little kerosene handy, because the exuded resin on the cones glues my fingers together. After I wipe the resin off with the kerosene rag, I wash my hands with soap and water so that no kerosene gets on the seed.

Scoop the seed up and throw it into a bucket of water. Slosh the seed around, the rubbing breaks the seed wings loose. The wash water will turn brown from the seed coating which is washed off the seed shell. The coating is a germination inhibitor. The seed doesn't germinate until the brown inhibitor coating is removed; in nature it's part of the process which occurs as the hard seed shell breaks down during natural stratification.

Allow the seed to settle in the bucket of water for a few minutes. Some of the seed will float. These "floaters" are discarded. The "sinkers" are then removed and placed on newspaper to drain. While the seed is still damp, dust lightly with Captan Fungicide, put into plastic bags and store in the refrigerator.

You may now rest a few minutes to think about some hundred year old trees, about two feet high with thick tapering trunk and.....

Japanese
White pine



Japanese
Black pine



Japanese
Larch



Hondo
Spruce



PRINCIPALS of SEEDING EVERGREENS

by Shoryūgen Shin

Translated by J.F. KOETSCH

The developing of seeds into bonsai is dependent on the way in which the seeds are prepared and on allowing the roots to grow vigorously and spread out in a proper soil mix. The number of seeds which will germinate, will also increase.

Collecting and Storage of Seeds

Collect the seeds in Autumn and place them in a water-tight (plastic) bag mixed with damp sand (see the accompanying diagram). Once the sand and seeds are in place, bind the top of the bag and place it in a cool, dark place (preferably at a temperature between 32 and 40 degrees fahrenheit) or bury the bag in the ground.

Selecting and Planting Seeds

Remove the bag containing the seeds from storage between March 10th and March 31st on the day before they are to be planted and soak them in a pan of water for a whole day. The good seeds will sink to the bottom of the pan and the bad quality seeds will be floating on the top. Discard those seeds.

Select an unglazed pot or wooden box for planting the seeds. Place red clay pellets for the drainage layer in the bottom of the box. Place a mixture of seven (7) parts red clay and three (3) parts river sand with the sizes of the soil mix tapering off to the smallest at the top. Cover the seeds with the smallest size soil so that the seeds are under a layer of soil which is three (3) times the diameter of the seed. Water the planting until it runs out of the bottom. I immediately place the pot or box outdoors on a shelf.

Directions for Managing the Seedlings

When the topsoil looks dry, water the planting and sprouts will begin to appear in about twenty (20) days. In the first ten (10) days of July, apply a light sprinkling of fertilizer (powdered rape-seed) to the surface of the planting. Do this fertilization once more in the first ten (10) days of October. In December, place the planting in a greenhouse. In the following year, between April 10th to October, dust the planting with fertilizer every second month. Also apply sufficient water. Repot the seedlings in the Spring of the third or fourth year in individual pots.

Cutting Roots

To obtain an even distribution of roots and eliminate a dominant tap root, the saplings can be cut as shown in the illustration. The right-angle cut is to start roots growing equally around the cut.

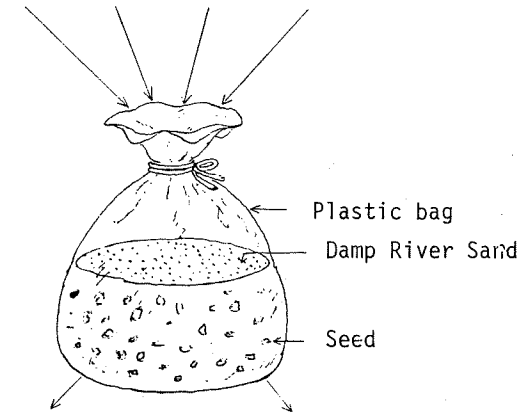
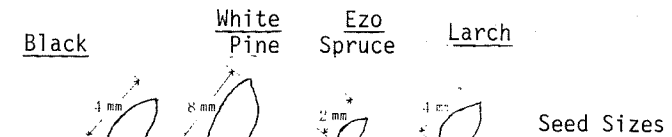
Editor's Note: About three years ago, I essentially followed the above approach. I planted the seeds in moist sand and placed the container for over sixty (60) days at 40 degrees Fahrenheit. In July, with more than a little trepidation, I cut the roots away and planted the tiny saplings in sand. To my amazement, they grew roots just as the article described it.

The above two articles are presented so that the reader can benefit from the information unique to each of the articles as well as choose from that which differs.

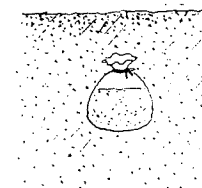
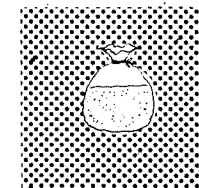
The above article appeared in "Techniques for Pines and Needle Trees", Seibundō Shinko Shā 1975.

STORAGE OF COLLECTED SEED

October to Mid-March

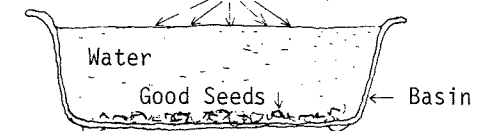


Store In A Cool, Dark Place *or* Bury In The Ground



SELECTION OF GOOD QUALITY SEEDS

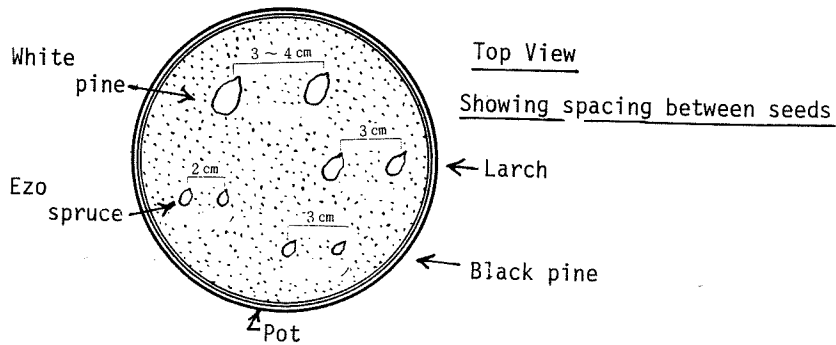
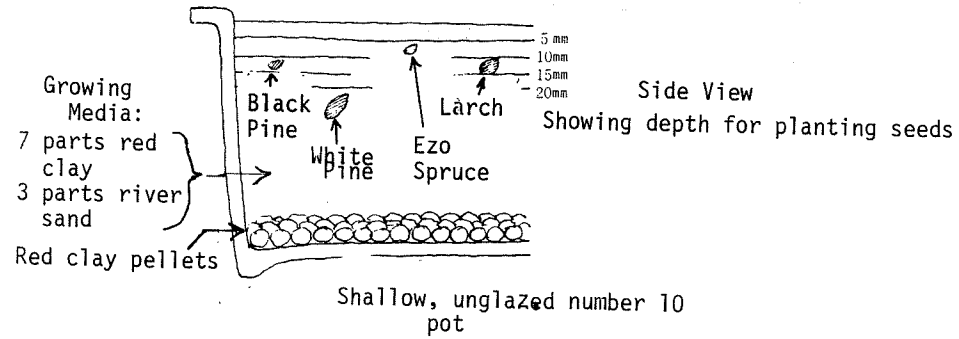
Bad Seeds Float



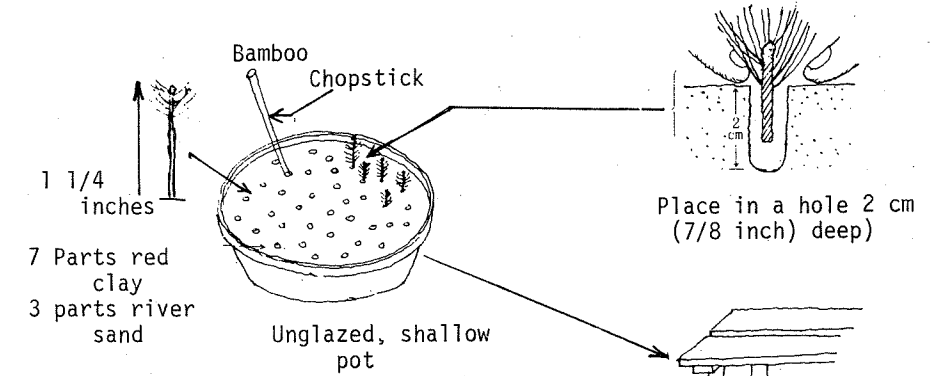
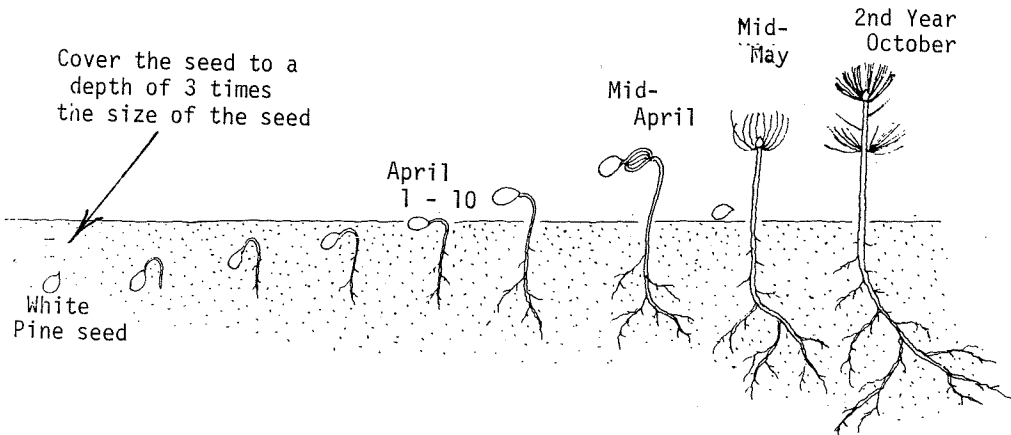
Place the seeds overnight, in a basin of water on the before they are to be planted.

PLANTING SEEDS

March 15 - 31



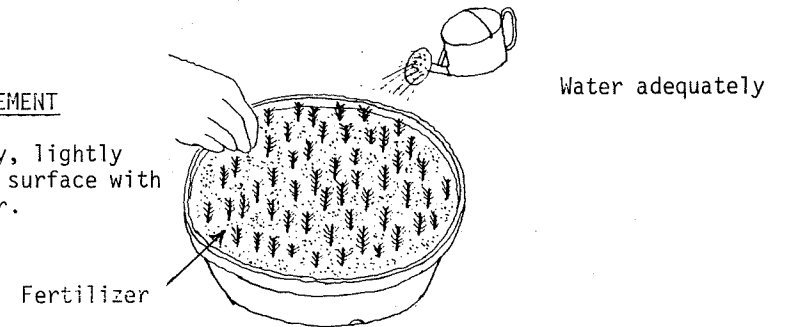
GERMINATION OF WHITE PINE SEED



PROCEDURE FOR CUTTING SPROUTS OF WHITE PINE, BLACK PINE, AND EZO SPRUCE

MANAGEMENT

In July, lightly dust the surface with fertilizer.



SCHEDULE

- Start: October - November - collect and store seeds.
- 1ST Year: Mid-March - plant seeds, place outdoors on shelf, water sufficiently.
First 10 days of April, July, and October - fertilize. December - place in greenhouse.
- 2ND Year: April 1-10 - place outdoors on shelf. Mid-April, mid-June, mid-August, mid-October - fertilize. December - place in greenhouse.
- 3RD Year: End of March - place in pot, put outdoors on a shelf, water adequately.
End of April - fertilize.

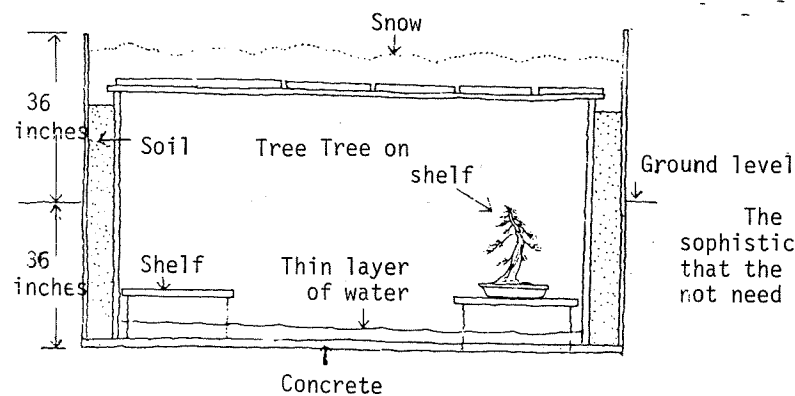
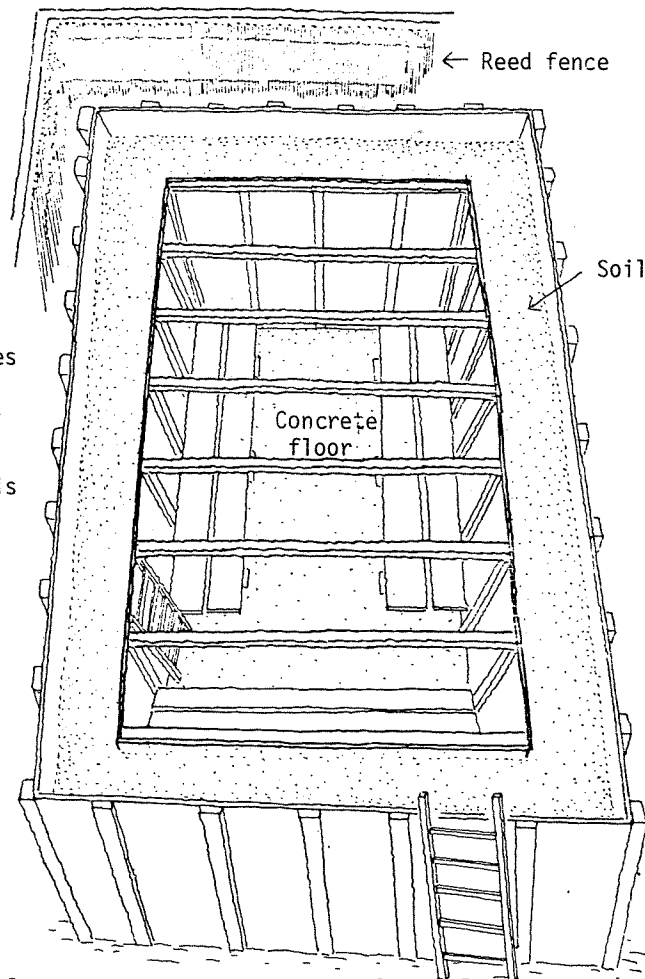
Ichiban Bonsai Winter Shelter

If you want to go first class, the accompanying sketches show a winter storage shelter which appeared in Bonsei Sekai.

The structure is half in and half out of the ground. Soil is placed between the walls for insulation.

A reed fence is placed around the shelter to prevent drifting snow from piling up.

Place the trees on the shelves with care so that the branches do not touch and there is enough room between them.



The structure is sophisticated enough so that the foliage does not need any watering.

SNIPS and Slips

SOIL SURVEY

Last spring I reported on a new soil mix I tried, using raw sawdust as one of the ingredients. The soil drained beautifully but, as the season progressed I was lucky enough to notice that the trees potted in it did not need as frequent watering as they had earlier, even during the hot summer months. The soil was still draining well, but took longer to dry out. My assumption, which seems logical, is that, as the sawdust decomposed, it absorbed water rather than repelled it. There were a couple of advantages to that: (1) the trees did not need as frequent watering and were in less danger of drying out if neglected for a day or two, and (2) the decomposed sawdust was an excellent organic fertilizer. Had I been less observant, though, I might have had a serious problem with overwatering.

IT'S A DOG'S LIFE

Dave Bogash put me onto this one. Being a veterinarian, he's aware of animals and their need to have a duty in which they feel they can be important. (Galahad has been protecting me from three-year-olds and gollywoggles for years, with complete success.) Dave has found a new duty for Tuborg, his German shepherd. It seems he discovered a "backpack" for dogs - a kind of a saddlebag affair, with breast and cinch straps to go around the dog, in which Tuborg can carry all kinds of tools on a collecting trip and free up his master to carry all kinds of collected trees.

Fin, Fur and Feathers Pets & Supplies, 5035 Ritchie Highway, Glen Burnie, Maryland (301-636-3900) carries them, and I understand Docktor Pet Center can order them with a deposit. The price is around thirty dollars.

Christmas is coming up, so consider giving your dog a new sense of responsibility and source of pride and yourself a break. (I wonder if they make saddle packs big enough for wolves like mine.)

WINTER PROJECTS

The holidays will soon be on us. Indeed the frenzy of Christmas shopping has already begin. I firmly believe that even the most confirmed Scrooges secretly enjoy it, tho they'd deny it vehemently with their last breath. The holiday spirit will usually linger to mid-January when the Dark Ages set in until early March. Then you start to notice all of a sudden that the days are getting longer and your spirits brighter.

Winter is the time to sit and dream in front of the fire (always assuming you have a fireplace or wood stove). Don't get too comfortable. Your trees may be asleep for the duration but, supposedly, you're not. While out walking pond you can be observing the deciduous trees, seeing how each species has its own growth patterns and storing this information in your mind, or even better, on film. You can also build boxes to use as training containers this time of year and have them ready for spring when you won't have time to build them. If you must be in a reclining position when it's cold out, bring your bonsai file up to date. Use out data cards for trees that have died or been gotten rid of (or file them separately with notations as to why they died or why you disposed of them), update others. If you're like me you haven't done this for a couple of years, and since half of my trees have been acquired in the last two years, there's no record for them at all. And if all else fails and you're still too lazy, dream about all the things you won't have done in the spring if you don't get a move-on now.

--- Mary Holmes

While visiting Jerry Davis in Florida after the Atlanta Convention, he showed an item which may be of help to those of us who have trouble providing enough humidity for growing cuttings. Using a one liter plastic soft drink bottle, he twisted off the black bottom and cut off the top of the bottle along the top edge of the label. Turning the bottle upside down, it will now fit into the black bottom. The bottom already has holes in it and punching one or two holes in the cover will prevent heat build up. You now have a miniature greenhouse for cuttings, seeds, collected wildling, etc.

Arschell Morrell

SLIDE SHOW REVIEW - "A Visit to Japan"

This slide tape show of 80 slides, is narrated by Dorothy Young. The show takes the viewer on a tour of bonsai nurseries, the likes of which we will never see in this country, pointing out the various specialities of each nursery, and it's training techniques. Visits are made to many gardens and stops are made at several kilns to show pots in various stages of completion. A look at the famous Annual Auction of Bonsai is shown and a few shots of personal collections whet one's appetite for more.

This is a good presentation since it shows a slice of the vast bonsai industry in Japan. The show provides good entertainment for half a program unless you have had a more up to date presentation on the same subject. The quality of the slides and the recorded narration were excellent. The slide show is available from ABS.

Arschel Morrell

Washington Bonsai Club's Trip To Longwood Gardens

The Washington group's trip to Longwood Gardens was lightly attended, partly due to the brisk weather prevalent on November 21, but most enjoyable. The Chrysanthemum bonsai were a highlight, as were the conservatory displays of chrysanthemums, which included huge spheres of yellow and white plantings suspended from the ceiling. An exhibit in a side hall showed how the spheres were made - the chrysanthemums were started in large shallow basins, which were later placed atop skeleton spheres so that the plants could be trained down the ribs of the sphere.

Other notable displays included a dwelling-type house set up to show how various plant materials can be used indoors. The orchid wing was full of blossom, and we were able to see the poinsettias and Reiger begonias being prepared for the Christmas display in some of the production houses.

Longwood, located on U. S. 1 near Kennett Square, Pa., also has notable outdoor gardens, but the day was too brisk to enjoy them. Those planning a later visit may be interested in the following schedule of indoor and outdoor displays:

January - April - - - - -	Conservatory spring flowers
April - mid-June - - - - -	Outdoor spring flowers
April - October - - - - -	Daytime fountains
June - October - - - - -	Roses, summer flowers
Mid-June - August - - - - -	Illuminated fountains
July - October - - - - -	Waterlilies
September - October - - - - -	Outdoor chrysanthemums
November - - - - -	Conservatory chrysanthemums
December - January 1 - - - - -	Christmas display; Christmas tree lane

The conservatories are open from 10 to 5 all through the year, with the main gardens having slightly longer hours (9-5 November through March, 9-6 April through October). Admission is \$3 (children \$1), and the two hour drive from Washington is well worth while, especially since the Wyeth museum on the Brandywine a little farther up Route 1 can easily be included in the trip. One word of caution: Longwood has no restaurant facilities of any kind, so bring a sandwich or plan to stop to eat before or after visiting the gardens - there are adequate if not ample eating facilities close to the gardens on Route 1.

Julie N. Walker

CLUB CALENDAR

December 13: Gulf Branch Nature Center, 10:00 a.m. Movie "Bonsai" from the Japan Foundation will be shown. It is a beautiful movie which compares trees in nature with their Japanese bonsai counterparts. There will be a rock-planting workshop which is a great indoor winter past time. Bring rocks, moss, and/or ferns and small plants and a tray. Muck will be supplied
NORTHERN VIRGINIA BONSAI SOCIETY (202) 862-1040 Weekdays

December 17: Main Building, Audubon Society, 7:30 p.m. BROOKSIDE CHRISTMAS PARTY. Refreshments. Door prize! Bonsai Slide Show. If you wish to participate in a bonsai grab-bag, bring a modest gift for swapping. Seasons Greetings!
BROOKSIDE GARDENS BONSAI CLUB (301) 299-6194

The following clubs:

Annapolis (301) 263-3995
Baltimore (301) 922-9310
Kiyomizu (301) 423-8230
Washington (202) 583-2676

are not meeting in December. Meetings will resume for the above clubs in January 1982.

Have A Great Time

During The Holidays

If you plan to attend a meeting other than your parent club's meeting, it is recommended to telephone the number listed above to confirm the arrangements. Because of any of a number of reasons, the schedule above can be changed. To be further on the safe side, you can telephone as early as possible to let the club know that you expect to attend and then request that you be advised of any schedule changes.

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