

# AMERICAN PAULOWNIA ASSOCIATION

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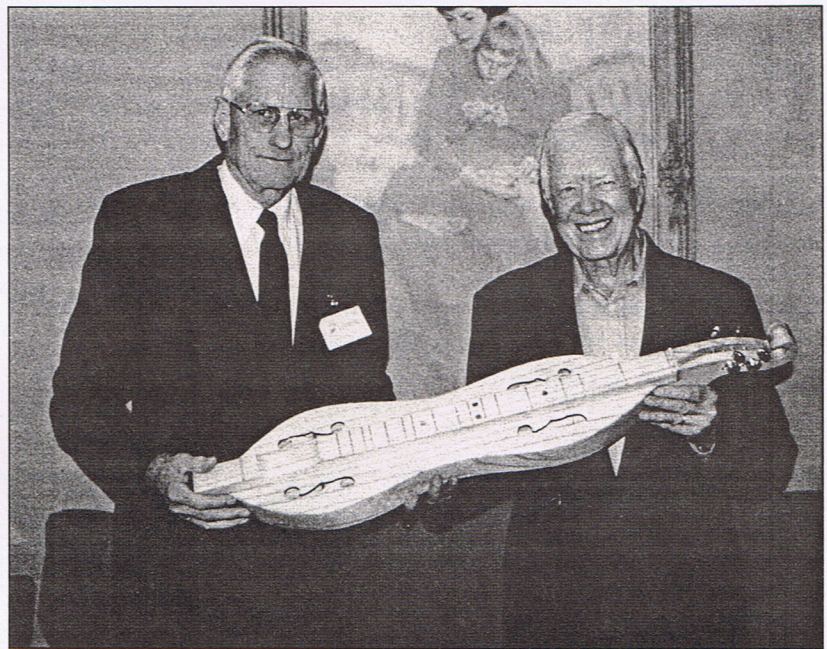
## *Some Simple Practical Suggestions for Cultivating Paulownia Trees*

by James (Jim) M. Smith  
Loveland, Colorado

1. **Start Small.** Plant no more than 100 root stocks on 1/4 acre of land to start.
2. **Site Selection.** The site selected should be:
  - a. Near a convenient source of water for irrigation if required;
  - b. Readily accessible by truck, tractor etc.;
  - c. Sloped enough to drain reasonably well;
  - d. Positioned such that it has at least exposure to direct afternoon sun. This will minimize future bark damage (sun scald);
  - e. Free from flooding. CAUTION: Do not plant in bottom land or any area subject to prolonged flooding.

**3. Site Preparation.** By controlled burning, brush hogging and/or manual removal, clear the site of all brush and "trash" trees, a chainsaw may be required for the larger trees followed by stump removal and/or chemical treatment. Collect, pile, and burn this trash at least one month prior to your scheduled planting operation.

**4. Soil analysis.** This is optional but useful. Your County Extension Office may have file



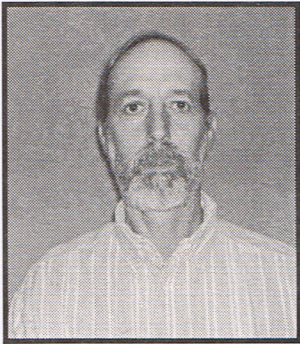
This dulcimer, which is made of Paulownia wood, was presented to President Jimmy Carter on November 14, 2001, by Robert Davis, David Drexler, and Darrie Hart, on behalf of the American Paulownia Association. This dulcimer is to be sold at the Carter Center auction in February. Proceeds will benefit the Carter Center.

The wood used in making this dulcimer was donated by Robert Davis to a fellow member of the East Tennessee Woodworkers Guild, who made this dulcimer and donated it to the American Paulownia Association.

President Carter was very gracious and talked with us about Paulownia wood and Paulownia trees for about 20 minutes. He is very interested in Paulownia, and has made some items from Paulownia wood.



## President's Message . . .



Danny Blickenstaff, President

I welcome each of you into a new year.

The year 2001 saw several adversities befall this Great Nation, and also an opportunity to grow as a "collective people." With our strength and resolve, I have no doubt we will not only survive, but thrive.

I wish to thank each of you for your support in my nomination and election as the new President, and I pledge my energies to the continued growth and accomplishments of the American Paulownia Association, Inc. I extend my personal gratitude to all the Officers and State Directors who continue to labor for us and also to each dedicated member who promotes our cause on a daily basis.

Opportunities for Paulownia and Paulownia products continue to increase monthly in the United States and abroad. The challenge before us is to capitalize on these opportunities and match the tremendous potential of Paulownia with these markets. Keep in touch with your State Director and each other, and together we will make year 2002 a most profitable experience for both you and the Association.

Warm Regards, Danny

data already on hand, i.e. test results of soil in your area. If such data is not available, submit a soil sample from your site for analysis and recommendations for corrective treatment.

**5. Layout Planting Lanes.** The planting lanes (rows) should be a minimum of 10 feet apart. For trees planted on 15 foot centers, you will need 1500 lineal feet of rows, etc. Straight rows are preferred, but they can bend and vary in length in accordance with the contour and boundaries of the site. Temporarily mark the rows to permit you to subsoil the rows.

**6. Subsoil Site.** Subsoil the rows to a minimum depth of 3 feet, then harrow them once (one pass) to break up the clumps of soil. If you do not have a tractor with a subsoiler blade and harrow, your County Extension Office can advise you on where you may be able to obtain this service.

**7. Tree Spacing.** After harrowing the rows, with a ball of twine or a 100 foot tape, stakes, or sticks, mark the center of the rows. Now proceed to mark the planting spots for each tree at your predetermined intervals (10, 15 feet, etc.) by use of the 100 tape or "heeling" the spots as you walk the rows (every full step is approximately 3 feet).

**8. Planting Stock.** I prefer root cuttings, measuring 5-6 inches in length and a minimum of 1/2 inch up to 2 inches in diameter. When ordering, ask the supplier to identify the smaller ends of the cuttings since some do not taper and are difficult to identify until bud stems develop. Ideally, before planting, the cuttings should appear as shown in Figure 1. If, when received, there are no signs of buds, their development can be stimulated by "stratification," i.e., storing them

for a few days in an *unsealed* box of *damp* sand, vermiculite, etc.

### 9. Planting Operation.

a. Using a garden trowel, open holes at the marked spots in the rows. These holes should be deep enough to drop the cuttings into, small end down, without harming or breaking any of the buds.

b. Next, with your hands, carefully firm the soil around the cuttings, leaving them covered with about 1/4 inch of soil.

c. With a garden spray can, spread 1/2 gallon

Root Cutting Ready to Plant

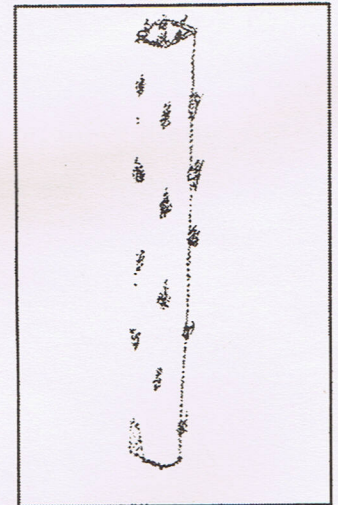


Figure 1

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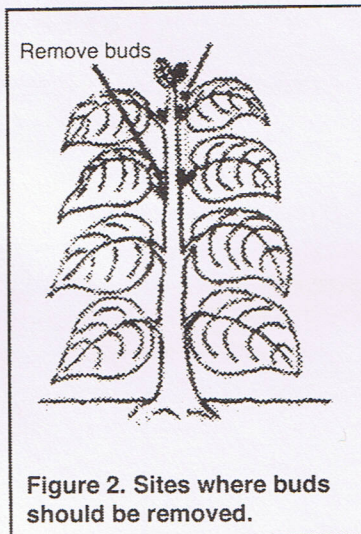


of water around the cutting, leaving the soil damp (not mucky). This *light* watering should be done as necessary to maintain this damp condition. A thin layer of hay, straw, etc. will help to keep the soil damp. Do not use grass clippings which will dry out and form a sealed mat and retard stem growth.

**10. Sprout Pinching.** Stem sprouts will shoot up rapidly, likely in a few days. When the sprouts are 10-12 inches tall, pinch off all but the 2 healthiest looking ones. Two weeks later, pinch off the weaker of the two. The survivor will be your tree if all goes well.

*Once the planting operation is completed, the developing stems must be routinely cared for as follows:*

**11. Removing Branch Buds.** Without harming the leaves, pinch off the branch buds as they appear, see Figure 2. These should be removed when they are 3-4 inches in length. If allowed to grow, the branch will leave a knot that devalues the log when marketed.



**12. Fertilization.** Do not over fertilize. Give the trees time to respond to each treatment, grow before repeating fertilization. The soil analysis may have revealed a major nutrient deficiency which should have been corrected at

the time of site preparation, see Step 4 above. As a safeguard, 2 months after planting, sprinkle 2 tablespoons of a commercial 10-10-10 slow release fertilizer around and away from the stems. Repeat this treatment as necessary prior to the beginning of each growing season. Increase the dose to trees which are laggards, i.e., slow growers.

**13. Weed Control.** This is very important, especially during the first 2 years. Use a rugged type domestic lawn mower, commercial brush mower, and/or a weed eater. Be careful to avoid contacting the stems.

**14. Insect Control.** Inspect the trees monthly, especially the terminal bud and the leaves, top side and underneath. Have your County Extension Agent verify any leaf damage such as: yellowish areas, excessive holes, etc., and recommend treatment.

**15. Coppicing.** Cutting the stems off 1 inch above ground level, will allow the root system to grow, producing better stems. Use a fine tooth saw to avoid loosening bark at the cut line.

Opinions vary as to when and how often the stems should be coppiced, i.e., after one or more growing seasons or after consecutive seasons. Stem growth is often irregular, some growing 10'-12' or more in the first growing season, others lagging behind. For the small introductory "learning" plantation, I suggest selective coppicing, after the first growing season, trees that:

- a. Are less than 4-5 feet tall;



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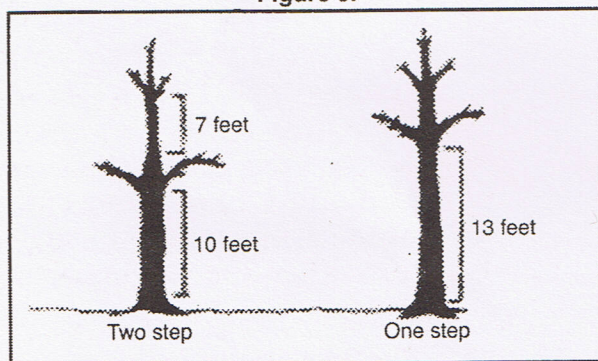


- b. Have broken, split, crooked, bent, or forked stems;
- c. Contain bark damage such as splits, bare spots, deer rubs, etc.;
- d. Are diseased. All diseased trees, including their root ball, should be removed from the site and burned. Do not replant in these spots, the soil may be contaminated.

After the stumps resprout, repeat the best sprout selection procedure in Step 10 above. Following the second growing season, most of the stems should be 9'-10' tall. Let them grow during this period, debudding them as necessary as explained in Step 11 above. Continue to debud any "laggards" as they eventually grow to the 9'-10' level.

**16. One Log or Two?** (Source: Bulletin FOR-39, University of Kentucky, Cooperative Extension Service, 9-89) "Paulownia culture in Japan presently recognizes 4 basic tree configurations suitable for plantation grown trees..." Figure 3 gives examples of two of the four accepted configurations.

Figure 3.



## WALNUT COUNCIL

We are an association of over 1,000 members representing foresters, researchers, and growers of walnut and other fine hardwoods in 45 states and 4 foreign countries. One of our objectives is to transfer forestry research and other useful information from the laboratory to the timber grower.

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"The preferred 'one step' method produces a long, single stem before the first limbs and the slow growth necessary for high quality logs.

"For the 'one step' method, remove the buds from the joint of the leaf stalk and the bole several times during the first year after resprouting, before they become woody. Leave only a few well developed buds at the top for next year's growth. Keep removing buds until the tree is the height you desire. While this method of pruning is different from the branch pruning used in the U.S., it is the method of choice used in the Orient and could be used quite effectively in the U.S. as well.

"The 'two step' method produces two short logs, one below and one above the first limbs; faster growing, short logs usually lower grade than those produced by the 'one step' method. Two step trees are produced similarly to one step trees except that they retain their buds 7 to 10 feet above the ground.

"Selecting one or a combination of growth configurations depends on the paulownia growers goals and the plantation's topographic conditions. Use the "one step" method on optimal southeast slope sites not adversely affected by wind or sun. Beckjord suggests that paulownia growers use the 'one step' or the 'two step' method. Sun scald problems can be overcome by either wrapping the stem with paper or painting the south facing part with white latex paint applied with a long handled paint roller. Early wind throw problems could be minimized by using landscape anchor wires."

**Summary Note:** Taller trees (20'-35') of some growers have been seriously damaged by strong winds, water soaked soil giving way under storm conditions, ice and heavy snow accumulations. I strongly recommend that trees in the small introductory "learning" plantation be cultivated to yield just one 9'-10' branch free log. 🌳

*The A.P.A. is now officially  
 on the internet.  
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**www.paulowniatrees.org**



# Fast Growing Elongatas

## Highlight 10th Annual Conference

by Lyndle Seaton, Editor

The 10th Annual American Paulownia Association Conference held in Santee, South Carolina on September 14, 2001 was very educational to all who attended. The weather was great and we enjoyed seeing Elongatas as big as 14" DBH, that were only 5 years old.

The meeting started with President Tom Copas addressing the crowd and leading us in a silent prayer for the victims of the terrorist attacks in New York, Washington, D.C., and Pennsylvania. He introduced Phillip Epps with Clemson University, School of Natural Resources as moderator.

After welcoming everyone to South Carolina, Dr. Epps turned over the program to Steve Perry, also with Clemson University, School of Natural Resources. He talked about how the Pine tree is a large industry in the state. This soft wood contributes much to the demand for wood products in the U.S.

Next in the line was Bob Davis from Sweetwater, Tennessee. He discussed "*Some Do's and Don'ts*" about paulownia. He talked about site selection, site preparation, and starting with healthy plants, as the key ingredients to successful planting with paulownia.

Tom Copas, Knoxville, Tennessee talked about "*Paulownia's Trees for the Small Grower.*" Tom has been a very effective instrument serving as our president. I would like to say **Thank You** for all of your hard work and dedication in making our association great!

David Drexler, Fitzgerald, Georgia followed with "*Attributes of a Paulownia Plantation.*" He showed slides of his beautiful Elongata clones. David also reported about getting up to 30' from coppice the first year. He conducted a study with seed trees and they were much smaller after 5 years of growth as compared to his clone "Americana 357."

Dr. David Sutton, Greeneville, Tennessee was next after we had a fine catered meal at the Ramada Inn. David talked about the importance

of genetics in successful plantations. Also, he compared Black Walnut to paulownia and showed that both species had similar requirements as related to climate, soils, and topography. Finally, he showed us slides of a tomentosa on his farm that was 13" DBH at 6 years old.


Dr. Vince Luchsinger, New Freedom, Pennsylvania shared "*Lessons We learned about Paulownia.*" He traveled abroad in education conferences and also ran into paulownia everywhere he went. He journeyed to Germany, China, and Argentina. In Argentina they had sunscald they called "Black Frost."

Jack Dickey, Rome, Georgia talked about his plans of growing paulownia in the tropics. His plans are to plant paulownias in Guyana, South America because of the length of growing season. He is starting with stock from South India. His goal is to use paulownia for appearance grade plywood, to supplement the shrinking supply of Yellow Poplar, which is currently used.

Vice President and Conference Chairman Danny Blickenstaff finished the speakers forum with presentations from past presidents including Don Augustine, Dave King, and Jim Smith.

Oliver Mizzell, Santee, South Carolina, told us a few things about his trees, then we left and drove down to his 100 acre Elongata plantation. It was really a sight to behold! The trees were only 4 years from the coppice and had up to 14" DBH. Everybody was amazed to see such unbelievable growth. We learned from the trip that cotton land is paulownia land and they really enjoy the sandy soil.

The next morning we finished the conference with a trip to Grady and Peggy McIver's in Swansea, South Carolina. He has the same Elongata clones that are performing just as well as Mr. Mizzell's trees. There is no doubt that paulownias thrive here in the Carolinas.

Finally, many thanks need to go to Danny and Sharon Blickenstaff for without their dedication to the APA, this meeting would not have been possible! 



# Trees for the Small Grower

by Tom Copas, Past President  
Knoxville, Tennessee

The American Paulownia Association (APA) has been largely concerned for the past ten years with the problems encountered in growing paulownia trees from plants. The size of the plantation was not a major consideration. We hear plans to grow thousands of acres of paulownia trees in other countries and a few growers in the U.S. are developing sites with large acreage of paulownia. The APA is pleased to learn of these efforts, but we also have a few patches of paulownia that are much smaller. I am aware of several potential growers that have only a few trees. In fact, one has a single tree to look at. Others have from four to a hundred or more.

My original objective was to encourage the small acreage tobacco farmer to start growing paulownia to eventually replace their current acreage allotments. Hopefully they would plant an acre or so each year for 10 to 15 years. Some of these farmers have tried to raise strawberries, cucumbers and other perishable crops with little or no success. The harvest period is short and the buyers are in control of the market. These products cannot be carried over for even one week. Paulownia trees can grow for another year or more if the market conditions should not be favorable. They may be sold on the stump, at the mill, or as finished boards, depending on the wishes of the farmer. This product does not spoil or eat feed. It will just grow larger.

However, these small growers have not always been successful in getting their paulownia patch started. Some treated the fragile paulownia plant like a hardened pine seedling. They stuck it in the ground with a planting bar without any fertilizer or water. One farmer planted an entire acre and lost more than 90% in a week or less. It will be a cold day in South Mississippi before he will try to repeat his effort to grow paulownia. And most of you can report one or more of these sad cases.

No, I am not suggesting that you should be your neighbor's keeper and hold his hand to produce a paulownia crop. However, you might provide some direction that would help improve

his efforts. Ideally we should point the farmer to his county agent, but we have many of these officials that are not well educated about this strange tree that he may classify as an unwanted intrusive species. In some locations, a private or state Forester might be available to provide assistance, but not always. Some state park authorities have sold these so-called weed trees and used the money for other programs.

I am aware of one Vocational High School (Vo Tech) that has provided paulownia plants to interested growers. But this effort is not widely supported and has not had the necessary educational materials to distribute to farmers.

The press has been both hot and cold with the Paulownia issue. Some potential paulownia growers have given up before they started when they discovered that the Japan market did not buy all paulownia at a high price. Some few have sold their wild paulownia to a local buyer at a low price and have no interest in cultivating this tree.

Why should the large grower of paulownia be concerned with the small grower? Following are several valid reasons for good communications between these growers:

No one of us wants to get up some morning and find that the paulownia has been classified as an undesirable weed tree and cannot be planted as a crop. The support of a large number of small growers could save the day.



## Forest Landowners Association

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If you are a timberland owner or someone interested in forest management, call today for more information about Forest Landowners Association and your free copy of *Forest Landowner Magazine*.



A few weeks ago I gave a lady a potted paulownia for her neighbor across the street. When the neighbor started to plant her tree, her neighbors on both sides made major objections. They thought it would spread like kudzu and take over their yards. This little problem has not been fully resolved.

The small growers can help produce enough logs to support a local mill that could produce a range of products. Some of these mills can use thousands of trees each year.

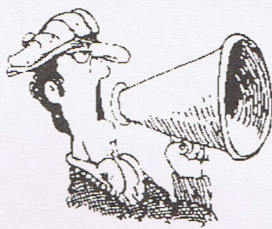
And do not forget the bees. They can convert the nectar from the paulownia trees into honey and play a vital role in the production of food products with their pollination effort. 🐝

The American Paulownia Association conference for 2002 will be held in Alabama. We have new State Directors there (Robert D. Brown, R.B. Brown, and A.J. Brown) who have both field trip sites to offer and are willing to help put a great program together.

Pat Estes, Vice President, will be making the initial contacts and will present her findings and recommendations to the Official Board during our March 23rd meeting in Knoxville, TN. By March we should have a firm date, location, facility and field trip options, and a conference theme. Also, perhaps by then, Pat will have contacted the Alabama State Forestry Division, the State University Forestry School, and speakers for their commitments of participation. Decisions made at the March meeting will be posted in the April newsletter.




Proceedings of the 2001 Annual Conference, which includes a "hard copy" of all handouts and speaker bios, are available for \$20 a set which includes mailing costs.



# Attention!

The "Paulownia Handbook" is still available at \$50/members and \$75/non-members plus \$5/shipping cost.



*Paulownia "hats, one size fits all" are still available for \$15.00 each and includes shipping costs. Also, ballpoint pens with the Association's name imprinted are available for \$5.00 each which includes mailing costs.*

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# Paulownia Field Day Held in Sweetwater, Tennessee



A Paulownia Field Day was held at Bob Davis' farm in Sweetwater, Tennessee on July 28 with about 40 participants representing Tennessee, Georgia, and Alabama.

Bob spoke to the group for a couple of hours, giving hands-on demonstrations of sowing seeds, transplanting seedlings to the fields, etc. This was followed by a tour of Bob's paulownia plantation. Dr. Wayne Clatterbuck from the University of Tennessee was present and answered questions from the group. Bob Sliger, Monroe County Extension Agent, was

also present and participated in the event.

Lunch was served, and the participants lingered until mid-afternoon asking questions and discussing paulownia with each other. Bob also had several items made from paulownia wood on display, which created a lot of interest.

There was certainly much enthusiasm for growing paulownia. Hopefully we will see several of these people become members of our association. 🌳

by Bob Davis, Sweetwater, Tennessee

Membership dues for 2002 are now due. Annual dues for individuals residing in the United States and Territories are now \$25.00 per year. All foreign countries and others are now \$50.00 per year. This was necessitated as a result of increased postage costs.

The opinions expressed by the authors are not necessarily those of the American Paulownia Assn. Inc. Reproduction of these articles are welcomed. Acknowledgment of its source would be appreciated.

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