PAWPAW PICKIN'S

State Chapter:
Ohio Pawpaw Growers Association

Contact the pawpaw discussion group:
http://groups.yahoo.com/group/Ohiopawpaw

NAPGA Facebook page:
http://www.facebook.com/NorthAmericanPawpawGrowers

Volume 17, Issue 1
Spring 2017

President's Patch by - Ron

Off to a new year and I hope that 2017 will be as good to me as was 2016 and I'll eventually catch up! My "new" knees are a real blessing since I no longer have any pain and wish that I could have done the knee replacement much, much sooner.

We have a new web mistress and she is working hard to create a new OPGA web site for us. We will introduce her soon when the OPGA web site has been completely revised and becomes available online sometime in March. Be sure to also visit the NAPGA Face Book page. Susan and Greg are doing a great job.

The NAPGA E-News has been revised to be more friendly to reading on a computer screen and printing on a home computer. The "Pawpaw Pickin's" will also be revised to reflect the move from a paper to an electronic newsletter. Solid colors will be reduced and some fonts will be changed. Any suggestions and/or comments would be welcomed.to improve our efforts in our communication efforts.

The annual meeting will be held on May 20th at Wilmington College in Wilmington, OH. The old Kettering Science Hall has been renovated and expanded as the new Center for Sciences and Agriculture (CSA). This is the largest academic building on campus. **A registration form is on page 7 or you can call or email me to register.**

We would love to hear from you regarding your pawpaws, and pictures are always welcome. It is preferable to have a diverse newsletter.

NAPGA & OPGA past newsletters are archived at Ohio State University, Piketon, Ohio

http://southcenters.osu.edu/horticulture/publications/newsletters/Ohio-pawpaw-growers-association-newsletters

Mission Statement

NAPGA

is an organization of pawpaw enthusiasts, backyard and commercial pawpaw growers, small and large, dedicated to promoting the superior traits of the pawpaw plant and fruit, developing a pawpaw industry and marketing plan, preserving and studying the wild pawpaw genetics.

Please check with Ron (Botrytis@fuse.net) regarding your membership status.

Inside this issue

Ambrosia Beetle

By Jerry Lehman

This article reprinted by permission. And is the second of a series on Ambrosia Beetles. I have one additional article on Ambrosia Beetle to publish and I'll address the fungus that the Ambrosia Beetle feeds on in the tunnels.

Last spring after the grafting meeting I went out to check my newest pawpaw section and discovered several of them with leaves yellow, small and wilting. Upon closer examination I saw little white toothpicks, telltale sign of ambrosia beetle.

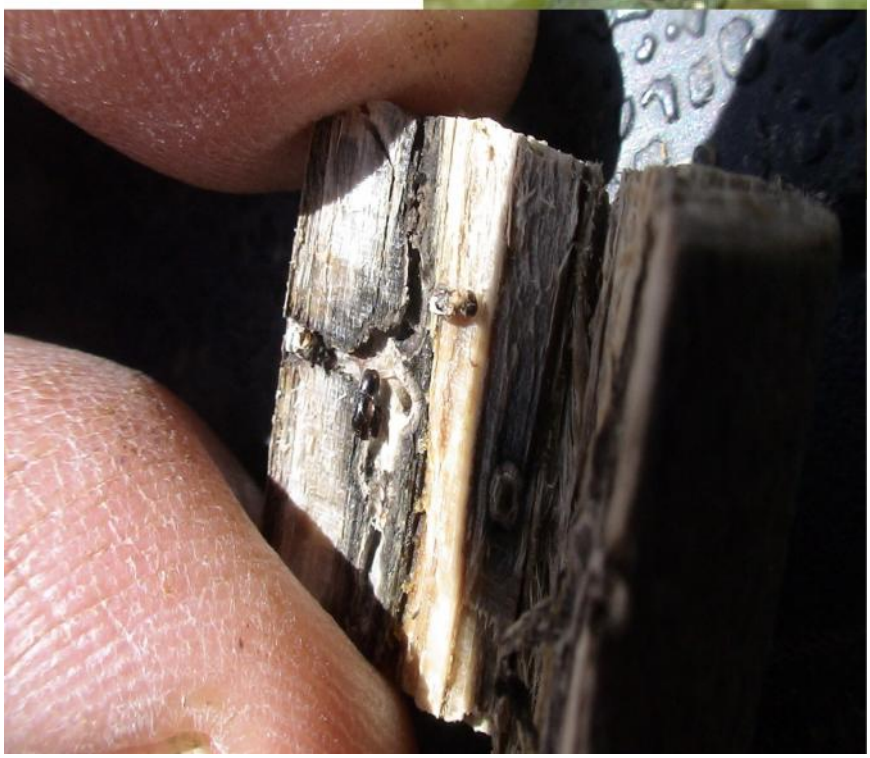
Ambrosia beetle has not been a problem in my orchard in the past. An attack occurred once on one persimmon and it did not survive.

Jim McKenna reported that the potential for damage is such that they must spray regularly every spring. And the time duration to spray is short, during the period they are actively attacking the tree to enter. Also heavy rain will wash away those frass chimneys shorting the time you will see them. Once inside they are protected from spray on the outside. Jim's advice was to use a spray with the active ingredient, Permethrin. I went to the local Growers Co -op and purchased a product called 38 Plus ($25/quart) and is labeled for ambrosia beetle, termites and more. Because my beetles were already in the trees I made a solution of 0.08 ounce in a gallon of water. This was sprayed on my smaller pawpaws in case there was latent beetle activity. Hoping to save some of the young pawpaws I used a hypodermic needle to painstakingly insert some of the spray in each of the holes.

Two days later an examination was made by cutting some of the trees open to check the results. Almost all of the beetles were dead but was able to save a few of the trees since the attack was light and damage was not as severe. There apparently wasn't severe damage to any of the trees.

This picture illustrates the channels they make. The beetles measured less than 3/16 of an inch in length. Attempts to save those severely damaged by taking cuttings and grafting was a complete failure, they were already too weakened to survive grafting.

There was no beetle activity in my small persimmons and other pawpaw patches several hundred feet away. Apparently there was an attack on one or two pawpaw seedlings the previous year which I hadn't noticed and this attack on about 10 trees was by a larger population of progeny from the year before. Larger trees in the same area were not attacked.



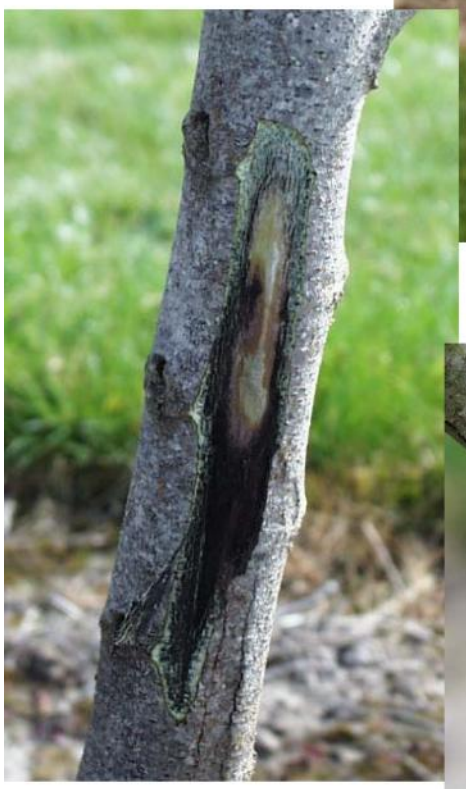
Vascular Decline / BSD - a Review

by Ron Powell

Over the last several years, I have fielded several inquiries regarding the vascular decline or Blue Stem Disease, BSD, as it has become known. I have spoken with Dr. Joseph Postman of Corvallis, Oregon at length since he was one of the original researchers of the problem in the Oregon Pawpaw Regional Variety Trial. He graciously shared the pictures that he had of the vascular decline and his current thoughts regarding vascular decline. I have not been able to acquire many pictures taken recently of the BSD. The reference for this article is from "Vascular Decline in the Oregon Pawpaw Regional variety Trial by Joseph D. Postman, Kim E. Hummer, and Kirk W. Pomper in HortTechnology, July-September 2003 13(3), pp. 418-420. and personal communication with Dr. Joseph Postman.

Stem canker symptoms associated with BSD. Blue discoloration is evident beneath the bark at the leading edge of cankers

The North American pawpaw planting at the National Clonal germplasm Repository (NCCR) in Corvallis, OR was a joint venture with the United States Department of Agriculture, Agriculture Research Service and the Pawpaw Foundation (PPF) to test commercially available NA pawpaw cultivars and PPF advanced selections in Oregon. Oregon is outside of the native range of the NA pawpaw. A Pawpaw Regional Variety Trial (PRVT) was established at the NCCR, Corvallis, OR in Autumn of 1995.



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The planting was a replicated planting of 10 commercially available cultivars that were available at the time. Several of the included cultivars are difficult to find or not available in the trade today. And 18 PPF advanced selections, selected by Neal Peterson from PPF Orchards at the University of Maryland Experiment Stations at Queenstown and Keedyville, MD. There were 8 replicate trees of each cultivar or selection that were grafted onto seedling rootstocks and planted in a randomized block design for a total of 224 grafted NA pawpaw trees and 76 seedling guard

plants. The guard plants or NA pawpaw seedling trees were planted around the field as a one tree wide border.

Two years after planting, 32 grafted pawpaw trees had either failed to establish or had died after an initial healthy start. Additional pawpaw trees were observed to decline in each succeeding year. Pathogens that cause wilting diseases invade the vascular tissue and cause the xylem to fail to transport water to the foliage. This is what causes wilting of leaves. In addition to these vascular-wilt like symptoms they may also include curling leaves, wilting, yellow or reddening leaves, stunting, chlorosis or yellowing of leaves, branches may defoliate or die back, sudden symptoms on one side of the plant and even may die that become apparent each spring after trees leaf out and discolored areas in the xylem tissue might be visible when the stem is cut.

As the transpiration demand increases with warmer and drier weather, the severely affected NA pawpaw trees collapsed (wilted and defoliated) and died. Moderately affected NA pawpaw trees became chlorotic with stunted new growth.

The vascular discolored areas of blue and black was observed beneath the bark of declining trees along the lower parts of the main stem, especially at and above the graft unions. This symptom has been described as blue stain.

A canker-like bark splitting was observed near the base of many of the declining trees, with smaller cankers on upper scaffold branches. No evidence of fungal tissue was found on the wood or bark samples from stem cankers on declining NA pawpaw samples, including blue-stained wood from what appears to be an infection front. Blue discoloration beneath the bark of the NA pawpaw trees seems to be a common response of the NA pawpaw to injury and may be associated with more than one disease or disorder.

It is not known whether the scions of the diseased selections may have been diseased when they were originally grafted, or they were more susceptible to this disease than other selections in the planting.

The Pawpaw Regional Variety Trial at Corvallis, OR was removed in October, 2002 due to the decline and death of NA pawpaw trees.. The mortality rate after six yeas was 75% for 8 cultivars, 9-58 and Wilson had the highest survival rate.

Efforts to identify the pathogen(s) associated with the decline symptoms in Oregon have been unsuccessful. Dr. Postman believes that the organism responsible for BSD is Psuedamonas blight but no positive identification has been made. He suggests not to remove lower branches and is caused by cool and wet conditions.

Another possible cause mentioned by other pawpaw growers is injury/stress. Symptoms are yellowish young leaves, plants leaf out early, distorted and stunted leaves, and rough areas on the bark and yellow fruit. Making a visual inspection of your pawpaw plants is necessary to detect BSD and other possible concerns early, so that control is possible.

Winning Pawpaw Wine

by Wesley Tucker

Mr. Wesley Tucker was very gracious in sharing his wine making recipes and experience with us. Wes won the wine competition at the 2016 Ohio Pawpaw Festival (trademark owner, Chris Chmiel). I am going to share his notes with you and several of his recipes that he has been using. Thank you Wes, your wine was **GREAT**!

Put water onto boil. The fruit needs to be peeled and cut into pieces. You may or may not remove the seeds. The fruit may be placed in a nylon bag, tied closed and placed in the 5 gallon pail. Mash fruit in the nylon bag pour sugar over fruit and, when boiling, pour water over that. Cover and set aside to cool. Recover and set aside for 12 hours. Add yeast when must cools. When room temperature, add all the ingredients except yeast. When the must is fermenting, stir vigorously twice daily for 7 days.

After taking off the must (take off must at 1.040 specific gravity). If in a nylon bag, strain bag and squeeze gently to extract most juice and flavor. I strain it through 3 fine mesh funnels and a nylon pressing bag which I cut up to fit over the 5 gallon pail. I pass the juice through all of these at once slowly stopping frequently to clean all the strainers. It's very difficult and time consuming, but the end result is worth it. You may save the "must" and start the same process over again. You double your amount of wine that way. The second run is called false wine but I don't like that term. I plan to use ripe mango and perhaps a little ripe banana just to add some color and flavor to the second run.

After putting the first run in to the secondary, fit airlock and set aside for 3 weeks. I then rack it again into another sterilized 5 gallon pail, being careful not to suck up any residue on the bottom. Fit the airlocks on again and wait three months. Additional time may be needed for the wine to clarify. At this point, I run it through a filtering machine using three filters. At this point you put the wine in bottles and cap.

Wes sent several pawpaw wine recipes that he uses.

Basic Pawpaw Wine Recipe:

2 lbs. ripe NA pawpaws

2 lbs. granulated sugar

1 gallon water

1 1/2 tsp acid blend or citric acid

1 tsp pectic acid

1/2 tsp grape tannin

1 tsp yeast nutrient

Wine yeast—"Cŏte Des Blancs"

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Pawpaw Wine Recipe #2:

5 lbs. ripe NA pawpaws

5 lbs. granulated sugar

3 gallon water

3 3/4 tsp acid blend or citric acid

2 1/2 1 tsp pectic acid

1 1/4 tsp grape tannin

2 1/2 tsp yeast nutrient

Wine yeast—"Cŏte Des Blancs"

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Pawpaw Wine Recipe #3:

10 lbs. ripe NA pawpaws

10 lbs. granulated sugar

5 gallon water

7 1/2 tsp acid blend or citric acid

5 tsp pectic acid

2 1/2 tsp grape tannin

5 tsp yeast nutrient

Wine yeast—"Cŏte Des Blancs"

Evidence of Insects

by Ron Powell

Over the years, I have collected hopefully some useful notes about insects and pathogens. Instead of starting another major article, I am going to list evidence of insects. Hopefully you will not see, hear or smell any of the items on the list but maybe you will be sensitized to keeping your senses on alerted to the many indicators of insects. This is not an inclusive list but a beginning to introduce you to what to look for in identifying insect damage.

1. Foliage:
   - Stippled leaves
   - skeletonized
   - missing tissue
   - holes
   - ragged edges
   - windowing
   - leaf is missing
   - defoliation
2. Webbing
3. Leaf mines
   - Serpentine
   - Blotch
   - Linear
   - Circular
   - Comma
   - Digitate
4. Egg cases
5. Fras / sawdust
6. Spittle
7. Sounds:
   - Chewing
   - Falling droppings
8. Insect
9. Honey dew / sooty mold:
   - Ants and/or bees visible
10. Body parts
    - Cast skins
    - Old cocoons
11. Exit holes in limbs, branches or trunk:
    - Borer injury
12. Dwarfing or stunting
13. Yellowing of leaves
14. Leaf curled or distorted:
    - Epinasty (the differential growth of petioles that causes a leaf blade to curve downward)
15. Browning of leaf margins
16. Wilting
17. Leaf drop
18. Bronzing of leaves
19. Galls
20. Oozing of sap or resin, bleeding
21. Loose or peeling bark
22. Predators"
    - Lady bugs
    - Birds
    - Ants
    - Bees
    - Moles
    - Raccoons
    - Skunks
23. "Cottony" mass:
    - Scales
    - Mealy bugs
24. "Notching" of stems or branches
25. Ovipositor injury
26. Smell
27. Slime trails
28. Soil mounding
29. Heat

Fruit Cocktail cake (unfrosted)

by Terry Powell

1 (18 1/4 ounce) box yellow cake mix (preferably with pudding in the mix, Betty Crocker)
1 (16 ounce) can fruit cocktail, including all but ¼ cup of the juice
½ cup pureed pawpaw
1 cup coconut, plus
1/2 cup coconut for topping
2 eggs
1/2 cup brown sugar
1 cup chopped pecans (optional)

- Preheat oven to 325*.
- Combine cake mix, fruit with juice, pawpaw, 1 cup of coconut and eggs in a large mixer bowl.
- Blend, then beat at medium speed for 2 minutes.
- Pour batter into greased 9x13 pan, or two 8x8 pans.
- Sprinkle batter evenly with remaining 1/2 cup of coconut, and then 1/2 cup of brown sugar.
- Bake at 325^0 for 45 min for 9x13 pan; (about 30-35 min for two pans).
- Serve warm or room temp; stays moist for several days. Refrigerate.

Serves 12 depending on how you cut it.

Baker's notes: Diabetic Friendly: Use a sugar free cake mix, and use Splenda brown sugar mixed with 2 Tablespoons melted butter.

Gluten Free Friendly: Use white gluten free cake mix, bake at 350^0 for 35 min.

2017 OPGA Workshop Registration Form

The 2017 Annual Meeting will be held at Wilmington College on May 20th

Center for Sciences and Agriculture on College Ave

By Mail: *Complete the information section below and return with the registration fee to:*

NAPGA/OPGA, % Ron Powell, 6549 Amelia Dr, Cincinnati, OH 45241

$12 - each for NAPGA/OPGA members and $15 - each for non-members

or

by Phone: 513-777-8367 or E-mail: Botrytis@fuse.net

Registrations by May 14th are appreciated so we can plan for lunch.

Please make checks payable to: NAPGA or OPGA.

The registration fee includes coffee and bagels at registration, and lunch. Please let us know a week in advance if you require a special diet or are vegetarian. A small NA pawpaw seedling and NA pawpaw scion wood to take home with you will be provided. A grafting demonstration will be presented by OPGA members. A visit to the Wilmington College farm NA pawpaw planting will take place in the afternoon, if weather permits.

Name: _____

Address: _____

City/State/Zip: _____

Phone: _____ **E-Mail:** _____

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NAPGA/OPGA Editor

Pawpaw Pickin's is published bi-annually by the NAPGA/OPGA, organizations dedicated to advancing the education and knowledge of North American pawpaw culture, encouraging the planting of pawpaws, the management and genetics of native pawpaws, and perpetuating the utilization of all NA pawpaw products.

NAPGA / OPGA Membership Form

Circle one: New Member Renewal Change of Address

Name:_____

Business Name:_____

Address:_____

City:_____State:_____Zip:_____

Phone: (home)_____(work)_____(cell)_____

*E-mail address:_____

***Must have an e-mail address. Newsletters will be sent electronically as a PDF file. There is only one state chapter at this time. As other states become chapters, affiliations, or clubs they will be listed so you may check which one you desire to associate.**

Please make your check or money order payable to NAPGA or OPGA and mail with this completed form to:

NAPGA

% Dr. Ron Powell

6549 Amelia Dr.

Cincinnati, OH 45241

Check membership level

Membership (annual)

- ___ **Student - $5.00**
- ___ **Family - $20.00**
- ___ **Lifetime - $300.00**

Sponsorships (annual)

- ___ **Individual - $35.00**
- ___ **Family - $50.00**
- ___ **Corporate - $100.00**

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