

Vireya Vine 78



VIREYA VINE

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E. White Smith, Editor

New Vireya Species Book coming soon by Dr. George Argent, Royal Botanic Garden Edinburgh. About 400 pages, 300 species descriptions, lots of color. Offered by the Royal Horticultural Society, London at \$100US with a 20% discount for pre order by **April 15th 2006**. I have ordered 15 copies for Vireya Vine people and another 15 copies for the RSF. I will pay for the 15 copies for VV people out of my pocket and hope to sell them all. I will sell the book at less than the cover price and will mail them to subscribers in the USA only. To be

published in May. **IF YOU want a copy please let me know right away, I can order more. This is going to be a very limited edition, so do not wait too long. E. White Smith**
Call us at Bovees Nursery at 1-866-652-3219 or e-mail at info@bovees.com
Don't forget by April 15th 2006

The Vireya Vine is financed by its subscribers. The only things you pay for are printing and postage. Fran Rutherford and I and my wife Lucie, do the work for the love of it. We do not have an annual subscription fee. Your mailing label will have a year date on it, which is the last time you contributed to the Vine. We welcome your contributions. You can use your credit card to make payments to the RSF for the Vine. We print this list because we think people are interested in who is getting the VV and growing the plants.
We say Washington State so that you do not confuse it with the US capital.

New subscribers or recent contributors are:

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George Argent	Scotland, UK
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**Taken from 'The Avant Gardener' PO Box 489, New York, NY
10028**

**If you like good information you really should subscribe to this monthly
newsletter (\$24 per year)**

ASPIRIN WATER WINS AGAIN

In January of last year, we published a report on 2004 trials of aspirin water at the Demonstration organic Vegetable Garden at the University of Rhode Island (Kingston, RI 02881). Spraying with a dilute solution (3 aspirins in 4 gallons of water) produced "amazing" results in improved growth and yields of many crops. Now the Garden's Director, Mrs. Martha MacBurnie, reports on the 2005 trials. "This year we tested aspirin against Messenger, aerated compost tea, a commercial organic liquid fertilizer, and control. Any direct-seeded plants had their seeds soaked in the test liquids and the plants were foliar-sprayed every three weeks after planting---we used compost tea in the same bed as last year and our last bed was the 'control' bed again this year. In a twist on the original experiment, we used Alka-Seltzer (generic) sugars instead of aspirin. One of our members is a retired pharmacist. He suggested that since aspirin doesn't dissolve well in water, Alka-Seltzer is designed to dissolve quickly and might be easier to use. Again, aspirin water was the clear winner in terms of plant health and yield. The biggest surprise was that the control bed came in second place and the other three products seemed to act as growth inhibitors. The Messenger plants barely grew at all during the season. Despite the great results our gardening friends on the West Coast are having with compost tea, for the second year in a row we didn't have much luck with it. Diseases were undeterred and yields were unremarkable.

"We did notice that the aspirin water plants were not as wildly vigorous as they were last year. We're thinking that it's the pH difference between aspirin and Alka-Seltzer that accounts for it, though we don't know the exact mechanism. So, needless to say, this year's experiment will be aspirin vs. Alka-Seltzer! Also, we've found that aspirin, while it doesn't dissolve in cider vinegar, it breaks into very small particles and disperses better in the sprayer in a little vinegar."

From George Watson
OR
Dear VV

Partner at Bovees Nursery, Portland,
March 6, 2006

Aspirin is aspirin? Yes and maybe.

All aspirin of regular strength contains 325 mg aspirin. The difference is how it is combined with the carrier to form a tablet. The inexpensive 5 gr aspirin use starch or some other substance to combine with the aspirin to make the shape of the tablet. These inexpensive substances often take a long time to dissolve before freeing the aspirin if much at all. A more costly aspirin tablet uses a binder that breaks down almost as soon as it contacts a liquid, freeing the medical agent immediately. In a simple test put a "Bayer" aspirin in a glass of water and a low cost aspirin in another glass of water, and see the difference for your self. Even after an hour you might have to break up the cheap one where as the Bayer dissolves almost without delay.

OK, fine, and it might not matter if you are taking the aspirin into your body as to how it breaks down. But I have found that when I use aspirin to spray on plants I really want it to dissolve quickly. If I just toss a couple of generic tablets into my 2 gallon pump up sprayer I sure don't want to find out after spraying out 2 gallons that the aspirin is still sitting in the tank. I guess we get what we pay for. The thing about Alka-Seltzer is interesting, so I will have to ask more and think about that a bit.

George Watson is retired pharmacist and Lucie Sorensen-Smith's partner at Bovees. They bought the nursery about 35 years ago from Bob Bovee's widow as a nice little retirement business. And we do spray with aspirin water. I am not sure if it helps or not but it does not hurt anything.
EWS

December 2005

E. White Smith Vireya Vine editor

After talking to Dick Cavender here in Portland, Oregon, we have installed a freeze alarm in our greenhouse and in our plastic houses. The only hard part of the alarm is finding a thermostat that will go down below 40° F. We set our natural gas heaters at 40 ° F, so if the power is off or something else happens and the temperature falls much below 40 the alarm (I used a buzzer in the bathroom next to our bedroom) the alarm will sound, and I will go and find out what is wrong.

How important is the alarm to us? If the greenhouses happen to freeze we and the world would probably lose the biggest collection of Vireya rhododendrons, over 700 clones. Many collections have been lost because of freezing when the growers did not know what was happening at the time.

OK yes we have tried the fancy radio alarms but they are not always reliable. The battery, thermostat, bell or buzzer always works and is cheap

to make up (\$50). The thermostat we are using is from "Farmtec" at 1-800-457-8887 or www.farmtec.com, their stock number CR2095 for \$24 plus shipping.

If you are growing tender plants in a greenhouse get with a program and install a freeze alarm to protect yourself.

Our next challenge is to figure out a way to transmit the sound of a smoke alarm, from the greenhouse into our residence. WE had an electrical caused fire in a plastic greenhouse last fall and lost about 50% of our two year old plants. A "baby monitor" has been suggested. Any other ideas?

E. White Smith, Bovees Nursery, Tacoma Chapter, Portland Chapter, American Rhododendron Society November 2005

It's your money. Using better lighting to grow Rhododendrons.

Lighting energy use accounts for about a quarter or more of the estimated one trillion kWh (kilowatt-hour) of energy yearly expended by the US commercial and industrial sectors. The cost to light US offices, factories, retail stores, warehouses and other commercial operations combined with outdoor lighting is close to \$20 billion. (kWh 1 kilowatt hour = 1000 watts per hour, all we need to understand is that a watt is a measure of electricity). Tacoma Power charges about \$0.6 per kWh. Portland General Electric charges \$0.872 or almost 9 cents per kWh minus some adjustments. In most of the US the cost of electricity is much higher. Take a calculator and add up your electric light use. Bulb Watts x hours used = kilowatts used per bulb x days used = a lot of money.

The US Department of Energy says that a 100 Watt Incandescent bulb that only cost 75 cents will cost you almost \$40 in electricity use and bulb replacement over just 3 years. A 23 Watt Compact Fluorescent will cost about \$20 for power over 3 years and the bulb will last another 3 years.

The cost of electricity is always going to go up. Many Rhododendron growers use lights to help root cuttings or grow seedlings and the lights work just fine. But the problem I have is the cost of running these lights. Our electric bill at Bovees Nursery in Portland Oregon runs about \$140 per month. Some of that cost is for rooting bed heating cables and fans.

Many of the lighting systems in use today are old technology. Also some of the lighting solutions are not very efficient dollar wise. But many new lighting systems are coming onto the market.

OK, our problem is cost of electricity to do the lighting we need. We have six, 8 foot by 3 foot rooting beds. Our beds are "sweat box" type with heat cables under the pots/plants. The beds are each three feet tall and the whole thing is covered with clear poly film. The beds are tall so that there is working room inside and they have fold up or pull up front sides. Last year each of these rooting beds had two, eight foot, fluorescent units. These units each had two 80 watt tubes, so $80 \times 4 = 320$ Watts per eight foot bed. We have now changed these fluorescent fixtures to the new "High Output" ones. The new fixtures are also eight feet long and contain two 110 Watt High Output bulbs. and we only use one unit per rooting bed instead of two, so $2 \text{ bulbs} \times 110 \text{ watts} = 220 \text{ watts}$ for a

power saving of 110 watts per hour of usage. The one new High Output fluorescent unit is much brighter than the two fixtures it replaced, so we gained all around, more light and less power used. Yes, the new high output fixtures cost more, \$45 compared to \$25 for the old ones. And the 110 watt fluorescent bulbs cost more, about \$5 each compared to about \$3 for the old 80 watt ones. So more light and less power used and we might come out even some day. We were replacing the old fixtures anyway when they went bad. The high output fixtures are “instant on” “no flicker” and “no noise”.

We run the lights at night in the winter for the added heat they give off, with a fan up high to direct the heat back down from the ceiling. We rarely provide any other supplemental heat in the propagation house. Because our propagating house is really a greenhouse, we were getting a lot of “light leaking” to the outside at night, and the leaking light was not doing the cuttings any good. I bought a roll of aluminum roof flashing material, 10 inches by 50 feet and cut it into 8 foot pieces. The fluorescent fixtures are hung just above the top poly covers, and I just laid the aluminum strips up against the light units like a lean-to tent. Boy did that stop a lot of light leaking to the outside and a lot more light was directed down unto the plants. Good deal. Next time I put new poly on these beds I am going to try some aluminum stuff on part of the sides also to reflect more light.

We also have a couple of seed growing chambers that had 48 inch fluorescent units in them. The fixtures had two 40 watt T12 tubes and I have replaced them with new two tube 32 Watt T8 units which seem to give a lot more light. Here again the old fixtures were going bad so they needed to be replaced anyway. The T8 fixtures are cheap, cheap, cheap, only about \$10 at Home Depot. So now we have again better light and less power used, instant on, no noise, and no flicker. Even the best T8 lamps will produce less light than the best T12 ones, but the T8s use less power.

Light is measured in lumens. One lumen is equivalent to the light given off by one candle where as a Watt is the amount of power a bulb uses to produce light. kWh = 1 kilowatt hour = 1000 watts of electricity used per hour.

Lumens divided by Watts = Lumens per Watt

$3,300/40 = 82.5$ lumens per watt (for the best T12 40 watt fluorescent lamp)

$2,650/34 = 77.9$ lumens per watt (for the best T12 34 watt fluorescent lamp)

$2,950/32 = 92.19$ lumens per watt (for the best T8 32 watt fluorescent lamp)

(The following fluorescent tubes are 4 foot long T12 types. Remember all of my numbers are what I could find at Home Depot or Lowe's so they are plus or minus.)

Approximate Efficiency		
Lamp Types	Range lpw*	Color Rendering Ability
Standard Incandescent bulbs	7 to 15	Excellent (100)
Tungsten Halogen	15 to 25	Excellent (100)
Compact Fluorescent bulbs	25 to 75	Good (70+) to Excellent (100)

Full Size Fluorescent tubes (80+)	65 to 95+	Medium (60+) to Excellent
Metal Halide	45 to 95+	Fair (50+) to Good(70+)
*Light Per Watt		

Demystifying Fluorescent Lamp Size

Fluorescent lamps are classified according to their diameter in increments of 1/8 inch. Such as.

T12 Lamp diameter is 12/8 inches or 1.5 inches

T8 Lamp diameter is 8/8 inch or 1.0 inch (next generation lamps that require an electric ballast, they are Instant Start, don't flicker, and make no noise)

T5 Lamp diameter is 5/8 inch or 0.625 inch (another new generation lamp/bulb)

Some facts (note that different manufacturers have different numbers (little bit different) At this time I suggest you only use Fluorescent lights to grow plants because of the cost of electricity. If you buy new fluorescent fixtures be sure that they have Electronic Ballast. The old type ballast were called magnetic ballast, the new ones are solid state electronic ballast.

Type of bulb	Watts used	Lumens output	Life of bulb/hours	Bulb cost
Incandescent	100 Watt	1690	750 hours	.50 to \$1.00
Incand Rough Service	100 Watts	1160	1000 hrs	\$2.00
Incandescent	75 Watts	1170	750	Not much
Incandescent	60 Watts	840	1000	\$0.60
At \$0.12 per kWt, 24 hour use cost 17 cents				
Compact Fluorescent	13 Watts	900	10,000	\$2.50
At \$0.12 per kWt 24 hour use cost \$0.037 that's almost 4 cents				
Compact Fluorescent (GE)	20 Watts = 75 Watts,	1200	8,000	\$5.00
+				
Compact Fluorescent (GE)	26 Watts = 100 Watts,	15-1700,	10,000	\$4.00 +-
Compact Fluorescent	42 Watts = 150 Watts,	2600	10,000	\$9.00+-
Fluorescent tubes 4 foot long	T12			
25 Watts	1860,	15,000	\$2 +	

Fluorescent tubes 4 foot long	T12, Philips Advantage			
40 Watts	3250	12 to 15,000 hrs		\$3
Fluorescent tubes 4 foot long	T8			
32 Watts	2900	20,000		?
Fluorescent tubes 8 foot long	T8			
57 Watts	5400	18,000		??
Fluorescent tubes 8 foot long	T12 GE XL			
60 Watts	5400	15,000		\$4 to
\$8				
Fluorescent tubes 8 foot long	T12 GE XL			
75 Watts	6700	15,000		??
Fluorescent tubes 8 ft long	T12 High Output			
110 Watts				\$4 to
\$7.00				
Fluorescent tubes 57 inches long	T5			
35 Watts	3650	20,000	?? If you can find	
them anywhere??				
Fluorescent tubes 57 inches long	T5 HO High Output			
49 Watts	4900	20,000	?? If you can find	
them anywhere??				

Remember these new fluorescent fixtures require the new “solid state” ballast, not the magnetic type ones. Beware of so called “energy saving” bulbs. They might save 15% of the electricity but are not as bright defeating the energy savings. In most cases you get what you pay for. I have tried to get good numbers for all of my “facts” but that is very hard to do. If you go to a store and look carefully at bulbs, you may or may not learn something. Sometimes they don’t tell you about light output so how can you compare?

Light level goes down by a factor of 4. If you triple the distance it goes down by a factor of 9. I think I remember that light is lost by the square of the distance by the foot.

You can also get T5 fluorescent grow lights and compact fluorescent grow lamps. There is one that uses 125 Watts and puts out 9500 lumens for \$70 and it might be a good deal if you could build a reflector for it to screw into. The commercial reflectors cost about \$60 with hardware.

Enough of that Fluorescent stuff. Are there better ways to get cheap light. You bet and it’s called L.E.D.s, Light Emitting Diodes. And you can buy plant growing fixtures that have LED bulbs but they are very expensive for now (like \$250 to light four square feet). Some day!! The big advantage of LED is that they use very little electricity and last almost forever. But LEDs are little bitty things and you need a lot of them to get

much light. Probably all of the little lights on your computer, TVs etc are LEDs. Some of the fancy new cars have LED tail lights so LEDs are coming but it will be a while. Sure wish I could figure out a way to hook some up and try them. If any one has some suggestions about using LEDs with out spending a lot of money please let us know.

Some people might question the distance of our lights from the cuttings. The purpose of the lights is not necessarily to push top growth, but to promote root growth by providing night and day periods , and at least a 12 hour day of light. Also we are not concerned about the frequency or color of the light. For our use, light is light, we get excellent results with both vireyas, hardy rhododendrons and hardy rockgarden plants.

E. White Smith, Tacoma Chapter & Portland Chapter ARS, Bovees Nursery

Root Weevils

November 14, 2005

Weevils, weevils, weevils. We all have some be it the Black Vine Weevil, the Strawberry Root Weevil, or the Obscure Root weevil. And we really do not care which one it is, we just don't want them eating our Rhodies. Root weevils do two kinds of damage. The real obvious thing they do is take notches out of the Rhododendron leaves and that is what most people see and object to. The less obvious damage that root weevils do is produce larvae which eat the roots of the plants. Eating the roots can and does kill plants or makes them so weak that they die from other things like a small lack of water.

The only good chemical we have had available for years was Orthene. For root weevil control with Orthene the plants needed to be drenched. It also needed to be used over and over and over. Drenching might kill the larvae. And if you don't kill the larvae you will have adults eating the leaves and laying eggs to make more larvae. Commercial growers have had another chemical that really works well--- "Talstar". Talstar was originally registered for use on termites and it was very, very good. It also was used to control ants where they were a problem. It provides long term protection from ants, crickets, ticks, fleas, fire ants, chinch bugs, army worms, termites, mealybugs and weevils plus many more insects.

Talstar is a synthetic pyrethroid low odor chemical that comes in two different forms; granular at 0.20% active ingredient and as a liquid concentrate at 7.9% active ingredient that was sprayed on (cost about \$125.00 for ? gallon). Both work very well

on root weevils. Talstar itself is not available to the public. BUT now you can get the same thing with a different name. The chemical name is Bifenthrin or sometimes it is listed as Bifen IT. I went to Home Depot and found this chemical in two products, Ortho "Home Defense" 'Max' at 0.05% for a 24 ounce ready to use sprayer at \$4.99. Ortho also has a concentrate called "Ortho-Klor" 'Termite and Carpenter Ant Killer' at 2.4% active ingredient for \$38.00 a quart. Yes \$38 seems to be a high price but this chemical is so good that you will get rid of root weevils (or almost), where as Orthene really did not do a good job. The "ready to use" product probably is not a good buy because you would need to use a lot of it at a time to get control.

The modern way to control pests in the garden is to use a product that does the job the first time. With Talstar type products you only treat the plants once (or at least not very often) and only the ones that have a problem. Never spray the entire area, just the damaged plants and the ground covers surrounding them.

Talstar and the chemical Bifenthrin are said to be very safe products and have a low toxicity. But it is bad for fish so keep away from flowing water. Again these products are a "synthetic pyrethroid". Pyrethrums are natural insecticides produced by certain species of the chrysanthemum plant.

Like most Rhododendron growers and hobbyist we had weevils at Bovees Nursery. But not any more. There will always be some around because they can come in from the neighbors, but with only a few treatments we are mostly free of this pest. I have not used an insecticide of any kind for the last two years (twice with Orthene in the greenhouse for aphids is all). We also spend quite a lot for wild bird seed and the little birds do a great job of insect control. Bird seed is a lot better than spraying insecticide any day.

E. White Smith & Lucie Sorensen-Smith

www.bovees.com

See Chris Callard's wonderful Web site at www.vireya.net

Get into this group and let's talk about Vireyas

www.groups.yahoo.com/group/vireya

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