GREATER VANCOUVER WOODTURNERS GUILD
CHAPTER 130 OF THE AMERICAN ASSOCIATION OF WOODTURNERS

VOLUME EIGHT—ISSUE 7 April, 2006

CONTENTS:

NEXT MEETING
April 26, 2006

Sapperton Pensioners' Hall
318 Keary St., New Westminster.
Meeting starts at 6.30

Main Event:
Small Pleasures—Suction Fit Boxes, Kerry Deane-Cloutier
Stay Healthy: Dust Collection for Woodturners, Dave Martin

April Food Providers:
Lisa Candlish, Peter Carroll, Neno Catania, Lorne Cawley, Adam Christiaanse, Steven Clark

UPCOMING PRESIDENT'S CHALLENGES:

April: Texture It!

May: What if I…?

PRESIDENT'S COLUMN:

Bruce Campbell

Thanks to Bob James for his presentation on bowl turning at the last meeting and to John Weir and Al Cusworth for the FoF presentations. With luck we will see more members showing us how they do it in the coming months.

All those that attended Eli Avesera's presentation and class gave rave reviews. We are even thinking of arranging a return visit next year. Thanks Eli.

Please remember the presentation by Andre Martel on Saturday April 22 at the Sapperton Hall. Andre is known for his end-grain turning using hooked tools that he developed. He will also teach a class at Island Woodcraft on Sunday April 23rd. See the March newsletter and the reminder below for more details on Andre's event.

We have recently arranged for a demonstration and class by world-renowned turner Jean François Escoulen from France. Mr. Escoulen specializes in off-center turnings and is the inventor of a unique chuck for such work. Please check out his excellent web site at http://www.escoulen.com and plan to celebrate Canada's 139th birthday at his demonstration. The demo will be at the Sapperton Hall on Saturday July 1st (Canada Day) and will be free to club members (non-members $25). His class will be on Sunday July 2nd at Island Woodcraft. As of this writing there are still some spaces available in his class so contact me directly if you want to take it.

Thanks go out to Gina for organizing and all those who came out to demonstrate and chat with the visitors at the Guild booth at the 2006 Fibre Fest at the Tradex Center in Abbotsford. This is the second year we have been there and each year we seem to make more friends with the fibre arts community. Thanks Gina.

Finally, On June 1st 2006 the Loving Spoonful Society will produce their 5th bi-annual Project Empty Bowl. This is a fund raising event helps the Loving Spoonful deliver meals and other nutrition to individuals and families living with AIDS. We can help by donating one or more bowl to the dinner/auction event. A representative of A Living Spoonful will be at our April meeting to provide all the details so why not plan to

MARCH'S MAIN EVENT: BOB JAMES ON TURNING A NATURAL EDGE CHERRY BOWL

Kerry Deane-Cloutier

Bob is a long time member of the Guild and an experienced turner with good tips for the rest of us. Most of the turning he does is wet turning. He does not do anything fancy when drying his rough turned blanks, and finds that his bowl mortality rate is about 30%. Burls tend to fare better due to the confused grain pattern. He pointed out that an inside recess in the base for rechucking does not work, due to the distortion that occurs when drying. Use a tenon instead.

Bob rounds the blank up, then starts hogging out the shape very roughly. When he is refining the shape he likes to use a shearing pull cut. When cutting the tenon, use calipers to check the size of your chuck jaws when they are almost closed, then mark that size on the tenon. Chucks hold much better when the tenon is properly sized. In addition, make sure the shoulders are flat so that the top of the jaws gets good contact with the bowl.

On the inside of the bowl, get the edge fairly thin while the rest is thick enough to support the edge. On a natural edge bowl, if the lower edges are thicker than the upper edges, cut straight in to even them out. Refine the outside before going too far on the inside. The Sorby Multi tool is one of his favorites for this part. He uses it as a shear scraper, the square part on the outside and the round part on the inside. His goal is to get as good a finish as possible and minimize sanding. Check out Bob's website at http://www.PlumbBob.ca to see his work. Thanks for the tips Bob!

Reminder: André Martel Demo and Class

Art Liestman

A quick reminder that André Martel, from Saint-Césaire, Quebec, will be here on Saturday, April 22nd for a demo and for a hands-on class on Sunday, April 23rd.

André has taught woodturning for about 20 years, specializing in end-grain turning with green wood and using the Martel Hook Tool. For more about André, please see his website at http://www.public.netc.net/martel.

On Saturday, April 22nd, the demo will be held at the Sapperton Pensioners Hall from 9:30 am to approximately 4pm. There is a $25 charge to attend the demo. During the demo, André will cover basic principles in woodturning (such as working with the grain and the beauty of the shearing cut), working with green wood (warping and shrinking), lathes and lathe tools. He will show how to improve your use of the super flute side ground bowl gouge and how to use hook and ring tools. This will be another very informative demo, so please don't miss the chance to see this well-known woodturner!

André will teach a hands-on class on Sunday, April 23rd at Island Woodcraft in Coquitlam from 9:30 am to approximately 4pm. The class fee will be $150. The class is full, but if you want to be on a waiting list in case of a last minute cancellation, contact Art Liestman at artliestman@shaw.ca.

YOUR HELP IS NEEDED

Merv Graham

The Carvers show is once again upon us!

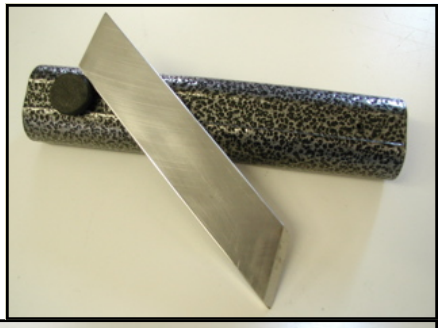
This year we are again taking an active role in the annual Richmond Carvers show in Richmond. The dates for the show are setup May 26th, show May 27th and 28th.

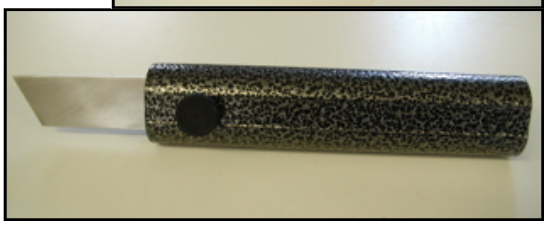
We are going to offer turning demonstrations and a display of member's work. We need your help to tend the booth and show your skills as a turner. We are looking for people with all level of skills to demonstrate and talk to the public about our club. This is great opportunity to advertise our club and what it has to offer. All levels from novice to Art Liestman are wanted. Merv Graham and Gregg Parsons are coordinating this part of the show so please sign up and help them to show off our club. Each person signing up will be given free access to the show for that day. Shifts will be 3 hours long, and extra help will allow people to spell each other off.

We are also in need of turned articles for the display. Please let's have a good showing of projects to show the public what we do. Some of the first ever bowls would be a great incentive for people think about becoming members and turners.

JOHN JORDAN SHEAR SCRAPER REVIEW

Art Liestman





For the past month, I've been playing around with John Jordan's new Shear Scraper.

This is a commercially available version of the tool John has developed over the past several years. The bottom line (here at the top of the review) is that I like it a lot and it has become my finishing tool of choice.

The business portion of the tool is a ¼" thick, 1" wide, 5 ½" long piece of HSS. The ends are ground at an angle of about 35 degrees to the length of the tool, with one end of the tool skewed to the left and the other skewed to the right. This blade is enclosed in a 7"x 1 ¼" x 1 ½" textured aluminum handle and secured by a small knob that can be tightened easily by hand. The blade can be retracted into the handle for carrying with nothing sharp exposed. Either end can be exposed giving left and right skewed shear scrapers for shear scraping with the blade traveling either left or right. The textured handle is very comfortable to hold.

Although I know that some turners use a pair of oppositely skewed tools, I have always used a spear pointed tool, giving me the ability to change direction quickly. One of my concerns with this tool was the loss of time when flipping the tool around. I have found that with a bit of practice it doesn't take long to switch directions.

The tool is ground at a skewed angle with a bevel of about 70 degrees. John recommends removing the burr from the grindstone and then raising a burr with a ceramic slipstone. He does this four or five times before regrinding the bevel.

This is a solid feeling tool and is nearly twice as thick as my previous shear scraper. I am impressed with the quality of the tool and with how well it performs. I've used it primarily on big leaf maple, but have also tried it on sycamore, pau amarello, cherry, and African blackwood. It seems to work well on all of these woods, giving a very clean finish. The wood comes off the tool in whispy curls.

As far as I know, the only source for this tool at the moment is John's website (http://www.stubbylathe.com/tools.htm).

DESERT WOODTURNING ROUNDUP, MESA ARIZONA, 2006

Ross Pilgrim

Six GVWG members along with some 300 others attended the first annual Desert Woodturning Roundup in Mesa Arizona, February 18 & 19, 2006, organized by the Arizona Woodturners Association, the AAW chapter serving the Phoenix area. It was well done and promises to be a popular draw for snowbirds and residents for years to come.

The venue was the East Valley Institute of Technology, which is a story in itself. The technical high school provided excellent facilities for the three rotations of ten demonstrators per day. Their Culinary Arts Training Program provided fantastic food and service as the students got the opportunity to "show their stuff".

The auditorium was the scene of the opening and closing ceremonies. The closing session included the Stuart Batty / Mike Mahoney 'Dueling Lathes' show. Once again, it proved very entertaining as well as instructive. Demonstrated as a race, the turners wearing spotless white turning smocks, each break whenever there is a teaching spot and explain their own approach or criticize there opponent's. There is great banter as they turn. At the end of the 30-40 minutes, Stuart ended with a very smooth bowl with ¼ inch walls in a slightly longer time than Mike took to produce one with 1/8 inch translucent walls. Mike supports his family from turning thousands of salad bowls and burial urns per year. Can you new or even advanced turners imagine producing a gallery quality 14 – 16" salad bowl in 20 to 30 minutes?

The rotational turners included Jim Christiansen, Gerritt Van Ness, Mike Mahoney, Stuart Batty, J. Paul Fennell, Phil Brennion, Kip Christiansen, Andi Wolfe, Dwight Klaus, Paul Porter and Dale Nish. I believe all but three of these have demonstrated at our club.

A highlight for me was seeing Andi Wolfe carve, burn and paint those beautiful "leaf motif" pieces that she does. It made me more envious of the members who were at the full day demo that I missed when she was in Vancouver. Another highlight for me was a session with Dwight Klause, a segmented turner and one of the symposium organizers. He had some excellent techniques on segment piece design, mathematics, safer cutting routines and a great jig for lamination glue-ups. I had seen demo's from the other turners before so had lesser expectations of them. To my surprise, the repeats also provided a lot of good tips and reinforcement of previous info that I had tried on my own so that I knew what questions to ask. I couldn't get in to one of the demo's I chose, so ended up sitting in on a Kip Christiansen demo on surface enhancements. Kip had changed the topic to basics since there were no scheduled rotations for the new turner but the time was well spent. Here is a summary of

Principles of Clean Cutting for Woodturners - *Kip Christiansen*

Sharp tools: sharp tools can give clean cuts, dull tools can't! None of the other principles matter much if the tool isn't sharp.

Grain direction: Fibers being cut must be supported by other fibers

Angle of Bevel: The longer the angle the finer the cut.

Keep the bevel in contact with the wood: the depth of cut is controlled by rubbing the bevel on the wood just behind the cutting edge.

Exit of shavings: The quality of the cut is directly related to how little the shavings have to change direction as they are removed from the work piece

Cutting edge contact: When less of the cutting edge is contacting the wood a finer cut results.

Feed Speed: The faster the feed the rougher the cut.

Stability of tool: Stable tools produce a finer, more controlled cut with less vibration.

The highlights for *Tom Byrom* were a good mix of turners with a heavy emphasis on design and surface enhancements. The vendor area (I think 8-10 vendors) offered good variety (right down to Rattle Snake skin pen blanks) and some good deals. Tom came home with a steal of a deal on a Jet air cleaner and a Triton Power Respirator system. The Banquet was a great event and the auction was also good but dragged on too long – something our guild should consider for our next symposium.

DESERT WOODTURNING ROUNDUP, MESA ARIZONA, 2006 (cont.)

Ross Pilgrim

The highlights for *Claudia Hayward* were:

Best presentation: Christiansen and Van Ness on Design Concepts - lots of great food for thought in a power point demo of different shapes and designs. Discussion of shapes in what is pleasing and why.

Best Sleeper: J. Paul Fennell, presentation on making small hollowing tools. He ended up with lots of time left over and did a slide presentation and discussion on where his design ideas originate showing the architectural shape and the resultant piece. He's not the best presenter but sure manages to communicate how he goes from initial inspiration to finished piece.

"Nuts and Bolts": friendly people, well organized, great venue and good food. And even though the weather was cool the sun was shining!!

The highlight for *Don Hoskins* was spending time with John Jordan, who was at the symposium as a vendor and also hosted a gallery reception in Scottsdale on the Friday evening. All of the symposium attendees were invited to the reception, but as frequently happens many missed out by not making the effort to get there. Don was delighted to be able to come away with a John Jordan piece for his collection.

ON RESONANCE

Dennis Cloutier

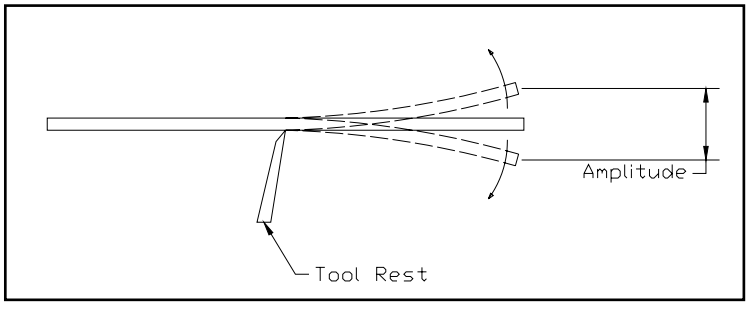
When I am not in my alter ego as relentless wood butcher and fearless newsletter editor, I am a mild mannered engineer. One of my areas of specialization is machine vibration. I thought some of you might be interested in learning some of the science behind vibration and resonance. I will try and keep things as non technical as I can, and hopefully a few of you will be able to stay awake until the end of the article.

First, a few definitions…

Vibration is the regular movement of a thing back and forth.

Frequency is how often that movement is happening. For example, if you have an out of balance blank on the lathe and you are spinning it at 1000 rpm, then your lathe is vibrating at a frequency of 1000 cycles per minute.

Amplitude is how far the thing is moving with each cycle. In Fig. 1, I have sketched a scraper hanging over a tool rest. If the scraper is hitting a knot with each rotation of the blank, then it will probably vibrate back and forth from its center position as shown.



Most objects have certain frequencies that they naturally want to vibrate at. These are called **resonant frequencies**. The standard example of this is a tuning fork. Tuning forks are used for tuning musical instruments. They are designed so that when you strike them with a hammer they vibrate at a certain resonant frequency, which your ear interprets as a specific musical note.

Life is a little more complicated than this because objects generally have more than one resonant frequency. For example, you can get chatter on a bowl where the gouge jumps once per revolution of the bowl. That would be the bowl's first resonant frequency. More often, the gouge will bounce many times per bowl revolution. This is still a resonance in the bowl rim, but it is at one of the bowl's higher resonant frequencies. The higher resonant frequencies are harder to get because you have to put more energy into the system to produce them.

ON RESONANCE (cont.)

Dennis Cloutier

But it takes very little energy to make a thin bowl vibrate. So it is easy to get up to the higher resonant frequencies on a bowl.

In theory every object has a resonant frequency. If you whack one of your gouges with a hammer, you should be able to produce a ring tone which corresponds to the tool's resonant frequency. If the tool is well damped (more about damping later) the tone might not be strong enough for you to hear, but it will still be there.

Another example of resonance is that most lathes have certain speeds they really don't like. Our DVR doesn't like 800 rpm. If we have a blank that is at all out of balance, the lathe will vibrate like crazy at 800 rpm. If we speed up or slow down a bit, then the vibration goes away.

Finally, I should define **Damping**. Damping is when some of the energy of the vibration gets sucked up by the material and changed to heat. Some materials, like steel, transmit vibration very well and provide very little damping. Materials that are good at damping are generally the ones that slosh around a bit and suck up some energy that way. This is why sand is a good material to fill your lathe stand with. The sand grains rub against one another and change some of the vibration energy to heat. This reduces the amplitude of the vibration. Viscous or gelatinous materials are also excellent at damping out vibration. As a result, many woodworkers install viscoelastic damping devices directly onto their bodies to combat vibration. These damping devices are usually installed in front of the body, near the belt line. This location makes it easy to press the tool handle against the device to maximize damping. When installed in this location this device is usually referred to as a **beer gut**. (You always knew there was a reason for that thing.)

Chatter and resonance are the same thing. So, when your bowl makes that delightful howl that means you're cutting waves in it, that means you have found the resonant frequency of the bowl and gouge. Most of us consider this a bad thing and would like to avoid it. Here's how:

Change Your Speed – The problem is happening because you are turning at a speed that excites the resonant frequency. Usually a 10 to 15% change in speed will be enough to get you out of the problem. Unfortunately, this doesn't always work. As I mentioned earlier, a system can have quite a few resonant frequencies, so sometimes we just find another one when we change the speed.

Increase Stiffness – <u>resonant frequency</u> goes up – If you use a tool made of thicker steel it will be stiffer, and the resonant frequency will be higher. The same is true of your bowl wall. The thicker the wall the higher the frequency. This is one of the reasons that chatter becomes a problem when the bowl wall gets thin. You can stiffen the tool by going to a thicker tool, or by shortening up on the tool overhang over the rest. You can make the bowl act stiffer by supporting it near the cut. You can also work your way from the top of the bowl in stages. The thicker parts of the wall will stiffen the whole bowl and support the thin part that you are cutting on.

Increase Mass – <u>resonant frequency</u> goes down – In my lathe example, I could put something heavy in the stand. This would lower the resonant frequency, and if I lower it enough, I might get to a point where the problem speed is below the speed I turn at. Some of you might notice that the stiffer tool in the point above will also be heavier. The added weight will tend to offset the added stiffness. But steel and wood are pretty stiff, so the stiffness makes more difference than the weight and the net result is that a heavier tool has a higher resonant frequency.

Increase Stiffness and Mass – <u>amplitude</u> goes down – The heavier and stiffer something is, the more energy it takes to make it vibrate. When you spin an unbalanced blank at a certain speed, the imbalance produces a certain amount of force and energy. As anyone who has dragged their lathe around the shop knows, it takes a lot more force to move an 800 lb. lathe than a 200 lb. one. So for a given force, heavier stiffer things vibrate less than light flexible ones.

Reduce Force – <u>amplitude</u> goes down – Vibration is caused by a force, which puts energy into the system in the first place. If you are rubbing the bevel, then you can press the bevel against the wood as lightly as possible. You can also reduce your cutting force by using a sharp tool and taking light cuts.

Increase Damping – <u>amplitude</u> goes down – Hold the tool against your body. Your body is a great source of damping, or at least mine is anyway. If it is your lathe that is vibrating, install a damping material like sand in the lathe stand. You can also provide some damping by supporting the wood behind the cut with your hand.

ON RESONANCE (cont.)

Dennis Cloutier

Hopefully I haven't either bored or confused you all to the point where you have given up (is anyone still out there?). If you think through these points whenever you get into a bad vibration problem (or when you are trying to cause one, as in chatter work) then you should be able to make the physics work for you.

INSTANT GALLERY

Hollow Form Vase - 7in x 13in - Maple Burl
Larry Stevenson

Hollow Form - 5in x 2-5in - Tom Kilgour

Goblet Box - 2in x 20in - Eli Avisera

Endeavour to Persevere - 3in x 2in - Maple Burl - Art Liestman

INSTANT GALLERY (cont.)

Hollow Vessel - 3in x 4in - Eli Avisera

Bud Vase - 2-5in x 4in - Mitchell Visser

Box - 2in x 3in - Buckeye Burl - Kerry Deane-Cloutier

Sphere - 2-5in x 4-5in - Maple - John Weir

Bowl and Lid - 8in x 4in - Walnut & Birch
Paul Blattler

Bowl - 10in x 4-5in - Maple - Doug Bryson

PRESIDENT'S CHALLENGE (ROUGH TURN, TREAT & FINISH)

Vector Bowl - 9in x 7in - Japanese Red Maple - Bruce Campbell

Bowl - 12in x 4in - Apple - Kerry Deane-Cloutier

Flying Away - 6in x 7in - Beech - Marco Berera

Green Turned Bowl - 6in x 3in - Cherry
Lance Rossington

Bowl - 8in x 3in - Arbutus - Jay Mapson

Bowl - 6in x 3in - Birch Burl - Dennis Cloutier

CLASSIFIEDS:

FOR SALE

Nova 3000 lathe. 1hp (110v) variable speed. New bearings in headstock. Includes stand, spur centre and knockout bar. $1200 Claudia @ 604 462 7597 or email to ve7_fbr@yahoo.ca

General Maxi lathe includes faceplate, spur center and knockout bar. $125. Contact Dennis or Kerry at (604) 468-0605 or at dennis@runningdogwoodworking.com

ANNOUNCEMENTS:

Turning 101

There will be a Turning 101 session at 9 AM on May 13, 2006, at Sapperton Hall. The topic is from blank to bowl. The June 10, 2006 session has a tentative topic on finishing bowls.

Dibblers from the last turning 101 on spindle turning

West Coast Woodturning Competition

The 7th annual West Coast Woodturning Competition is now gearing up. Start planning your entries! Sponsors are already lined up, and fundraisers are planned for the next few months. Be on the lookout for a fast paced sale of hundreds of board feet of rough cut lumber. Tell your friends, they're invited too! There'll also be some magnificent burls for sale. We'll also have another bandsaw event - your chances to win are even better than before - be on the lookout for ticket sellers at all club functions. This year the competition will bring more cash and merchandise prizes than ever before. Enter any number of pieces and watch for new categories too.

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