Leather vs Balsa strops

Posted by WayneNicklin - 22 Jul 2012 07:41

Can some one explain to me when one material is more appropriate than the other in terms of stropping? So far been only using leather with various micro grits and seeing some amazing results.

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Re: Leather vs Balsa strops

Posted by PhilipPasteur - 23 Jul 2012 08:33

I think the OP asked about the philosophy of using balsa. I interpretted that as meaning where in the progression and with what abrasives. That could be way off. Unfortuantely I don't hink that he indicated his goal. Mayb he will do that for us so that we can better try to answer his specific questions.

I have a bit of a conflict on the choices. For the most part I sharpen for function. After all I use my knives to cut things. That is what knives are in the final analysis, they are tools for cutting things.

For the 50 some years that I sharpened by hand I developed progressions that would result in the knife doing something that I needed it to do. I sharpened knived for divers with a mill bastard file, because they said my "sharp" blades weren't useful for cutting rope and seaweed. A sharpening regime for a specific outcome.

With my getting into controlled angle "precision" sharpening I am intrigued by trying to get the "perfect" edge. Perfectly straight, perfect geometry to let it hold together at the thinnest apex possible. Oh yeah, and one that is a mirror. I also realize that this is a completely impractical pursuit. Yet I still do it!

Once we get to where the declaratory statements can be backed up by objective testing on a repeatable basis, I can stop treating them as a single persons anecdotal assertion about what works for them. These I find interesting and they give me places to start my own work, but I can't take them as definitive.

I think we are getting closer with the ability to resolve features down to 0.25 microns as Clay's new scope should be able to do. At least this gives us the ability to see what is going on. This, and maybe the sharpness tester that you folks are working on, may get us to the point of eventually having a cookbook for getting the perfect edge, but we aren't there yet.

That is why I advised the OP to play a bit and see what works for him.

Phil

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Re: Leather vs Balsa strops
Posted by WayneNicklin - 23 Jul 2012 08:59

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The reason I brought it up was there are so many choices for stopping. Balsa and leather seem to be the most predominate. Was just curious what the general community was doing. I get the give issue that leather affords and the stiffness qualities for balsa. The prevailing theories so far on this forum and a number of others is the balsa affords a better platform for the ultra fine cutting particles. But this can be a personal preferrence based on everyone have different techniques and preferrences. I think all the comments work for either medium based on experience and what that person has in stock to do the job. As some of you have stated, "what is the application?", it is still fun to take it to the max. I make a point with my clients to discuss what kind of edge are they looking for and more importantly what are they willing to pay for. For a lot of them they have little or no working knowledge of what a blade is capable of doing. In most cases they prefer a slight tooth to the edge and so I stop between 800-1000 grit. Those that want it pushed I go to what I have available in grit size. Going to try my first balsa grit at 1 & .5 micron. Should be fun. Thanks for all the feed back.

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Re: Leather vs Balsa strops
Posted by cbwx34 - 23 Jul 2012 14:20

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PhilipPasteur wrote:

Check out this thread:

www.wickededgeusa.com/index.php?option=c...9&Itemid=63#2431

I'm glad you brought this back up... I apparently didn't read it close enough before. There's a lot of good info in there.

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Re: Leather vs Balsa strops
Posted by BassLakeDan - 23 Jul 2012 22:57

PhilipPasteur wrote:

.. I sharpened knives for divers with a mill bastard file, because they said my "sharp" blades weren't useful for cutting rope and seaweed. A sharpening regime for a specific outcome.

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Phil

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here in the Sierra National forest we don't do much diving, but we sure sharpen a bunch of chain saws ! It's *all* done with files !

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Re: Leather vs Balsa strops
Posted by PhilipPasteur - 23 Jul 2012 23:03

I should have added...

under water... water and the speed attainable moving under it... bring a whole new dimenssion to the discussion...

Anyway, I have a hard time keeping my chain sharp...and I use the saw about 5 times per year...

Hit the dirt or sand one time... you are hosed...

No Chosera 10K need apply !!!

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Re: Leather vs Balsa strops
Posted by mark76 - 25 Jul 2012 03:10

I've been doing a lot of experiments in which I compared, among others, leather strops and balsa strops. You can find the results on my blog .

The obvious differences between leather and balsa are that:

- leather affords more than balsa, which is very stiff
- leather has more draw ("stiction") to it than balsa, which is very smooth

The fact that leather is less stiff than balsa makes leather more suitable for turning a multi-beveled edge into a convex edge. Clay has done a few videos on that and you can find a few posts about that on my blog.

If you don't want to convex an edge, but simply strop a final bevel, the stiffness differences between balsa and leather are negligible as far as I have been able to observe. For example, on the WEPS, a leather strop kept the edge of the edge just as straight as a balsa strop.

You can use the fact that leather has a bit more draw to it than balsa if you wish to create a mirror edge. To create such an edge, it is more important to burnish the edge than to abrade it. The draw leather has to it aids in burnishing. However, the Wicked Edge stropping pastes already provide a lot of draw themselves. So if you use these pastes, the difference between leather and balsa in this respect becomes less important. Some of the pictures on my blog show that balsa can get an incredible amount of "stiction" if you use these pastes. Also see a recent topic by Clay on the different effects of stropping (abrading, burnishing, honing).

A less obvious difference between leather and balsa are their own abrasive qualities, i.e. their abrasive qualities when used without any stropping compound. Clay has posted some pictures (perhaps in the thread Philip referred to; I cannot find them back immediately) of the effect of a leather strop on a nearly clean edge. It appeared that leather (at least the leather used for the WEPS strops, which I think is quite smooth) has abrasive qualities of its own in the submicron range. I cannot say whether these are relevant already when you use a 1 micron compound, but when you're at about 0.5 micron, these are almost certainly relevant.

So indeed, balsa is probably more suitable at the submicron level. However... I don't know how effective balsa is with diamond sprays in these ranges. The space between the ligaments balsa is made of is apparently about 0.5 micron. So if you use a submicron compound, the abrasive particles may partly disappear in the "crevices" between the ligaments. Obviously, not all particles will disappear in these crevices, but this may make balsa less effective. But, as I wrote, I just don't know. If anyone knows about

any experiments in this area, I'd be happy to know.

I nowadays use a special cloth mounted on aluminium when I strop at the submicron level. This cloth is fabricated specifically to hold tiny particles in place, but not to cause any abrasion by itself. I am quite happy with the results, but cannot substantiate it with any microphotographs.

Fortunately Clay now has a 2000x microscope

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