Ascending Stone Progression at 800x

Posted by wickededge - 17 Aug 2012 11:46

Here is a fun study I started this morning - I'm taking a series of identical blades through the different stones I have. I started with the 50# diamonds and so far have progressed up through the 1um strops. So, without further hesitation, here are the images:

50# Diamond Stone

Zoom

80# Diamond Stone

Zoom

It's difficult to clean the edge of the blade since it's so toothy and snags just about everything it touches. There is some residue on the edge, especially in the 50# image.

==========

Re: Ascending Stone Progression at 800x

Posted by cbwx34 - 17 Aug 2012 17:36

So much for that theory. Looks pretty rounded.

Thanks!!

==========

Re: Ascending Stone Progression at 800x

Posted by wickededge - 17 Aug 2012 17:41

---

cbwx34 wrote:

So much for that theory. Looks pretty rounded.

Thanks!!

You bet. I thought the same thing. It was only 10, very light strokes too.

==========

Re: Ascending Stone Progression at 800x

Posted by WayneNicklin - 18 Aug 2012 08:37

_____

This could also be an opportunity to try balsa and see the results. Less give in the material might result in less rounding of the edge. Just a thought.

==========

Re: Ascending Stone Progression at 800x

Posted by cbwx34 - 18 Aug 2012 10:04

_____

I'd like to see balsa too. Get to work Clay!!!

This thread has a ton of interesting info... makes me wonder if I spend too much time with leather. Pretty impressive how clean the edge got with just 10 strokes at a lower angle! I'm also wondering about the burr left with the Micro Fine stones... although I noticed it didn't seem to be as prevalent the 2nd time around (before you did the higher angle stropping). Wonder if an edge leading stroke with the ceramics would eliminate the burr more effectively.

Man, this is good stuff. I'm glad you're doing this!!

==========

Re: Ascending Stone Progression at 800x

Posted by MathewWhaley - 18 Aug 2012 12:51

_____

I'd be very interested in seeing the balsa results as well, in particular, how much pressure can be used before rounding the edge. My normal progression after sandpaper is 5, 3.5, 1, .5, .125, .05.....all on balsa. Even going as much as 100 passes on each though, I can never fully get rid of the sandpaper scratches with how lightly I contact the blade.

Id also like to see what effect blank cow leather has on an edge, if any.

==========

Re: Ascending Stone Progression at 800x
Posted by wickededge - 18 Aug 2012 13:53

_____

I can tell you already that kangaroo leather is the way to go if you're interested in getting rid of all the scratches. Somewhere in these forums is a progression I did ending with kangaroo in which the edge is visually perfect at 500x. I've been able to repeat that result many times so I don't believe it's a fluke of camera angles or lighting.

MathewWhaley wrote:

I'd be very interested in seeing the balsa results as well, in particular, how much pressure can be used before rounding the edge. My normal progression after sandpaper is 5, 3.5, 1, .5, .125, .05.....all on balsa. Even going as much as 100 passes on each though, I can never fully get rid of the sandpaper scratches with how lightly I contact the blade.

Id also like to see what effect blank cow leather has on an edge, if any.

==========

Re: Ascending Stone Progression at 800x
Posted by ApexGS - 18 Aug 2012 23:17

_____

Interesting info on rounding the edge a little. Would it be advisable for some situations to back off the arms a degree or so if you wanted to maintain really sharp geometry? I'm playing with an old Imperial filet knife as I type this and just finished the 1000 grit diamond stones, so it's strop-ready. I'm curious to know if there would be a benefit to backing it off a little or just stropping normally.

I would guess that at a slightly shallower angle the tiny facet from the new profile would blend in better as well, but I haven't toyed with much on my new kit yet

==========

Re: Ascending Stone Progression at 800x
Posted by AnthonyYan - 19 Aug 2012 14:12

_____

Hi Clay,

Nice!!

Just a couple of questions:

(1) Are these images from your new metallographic microscope?

(2) What is the scale of the images (if you know)?

(3) Are these photos taken as black-and-white?

Looking forward to more of your results.

Sincerely,

--Lagrangian

==========

Re: Ascending Stone Progression at 800x
Posted by wickededge - 19 Aug 2012 14:49

ApexGS wrote:

Interesting info on rounding the edge a little. Would it be advisable for some situations to back off the arms a degree or so if you wanted to maintain really sharp geometry? I'm playing with an old Imperial filet knife as I type this and just finished the 1000 grit diamond stones, so it's strop-ready. I'm curious to know if there would be a benefit to backing it off a little or just stropping normally.

I would guess that at a slightly shallower angle the tiny facet from the new profile would blend in better as well, but I haven't toyed with much on my new kit yet

One of the things that I found really interesting is that I still experienced rounding with stropping after lowering the angle by two degrees per side. I'll try the experiment again at 3 degrees lower per side and so on until I find the setting that allows me to just reach the edge without rounding.

==========

Re: Ascending Stone Progression at 800x
Posted by wickededge - 19 Aug 2012 14:54

Howdy

Just a couple of questions:

(1) Are these images from your new metallographic microscope?

These are from the new scope. The 100x objective still isn't working, so I'm limited to 800x.

(2) What is the scale of the images (if you know)?

What do you mean by scale? Are you talking about microns/pixel or something else? The camera is 10 MP.

(3) Are these photos taken as black-and-white?

These are taken in color.

So far, it's a really fun study to do. I'm working on a developing a little jig that will allow me to hold the blade in exactly the same place on the stage so I don't have to do so much fiddling for every picture.

==========