What is the use of a convex edge
Posted by mark76 - 17 Jan 2013 09:36

I moved Ken's question to a separate thread, since it is about a different topic that might develop into a whole new thread. Ken refers to the following thread: www.wickededgeusa.com/index.php?option=c...d=8534&Itemid=63

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Re: What is the use of a convex edge
Posted by mark76 - 23 Jan 2013 14:41

Mikedoh wrote:

I will tell you, that the blunt one will jar you to your very soul and not split the wood, while the narrow one gets in deep enough before acting as a wedge and splits the wood. I am able to swing my maul (circular fashion, not just raised back and hit the wood) and am able to hit the wood with considerable force and accuracy. The blunt one, no, I do not recall it becoming stuck. The narrow one becomes stuck at times, but is by far the better splitter, the blunt one, bounces and jars.

This is entirely consistent with what I wrote (and others - it was a summary). A sharp edge will - as long as it doesn't get damaged - obviously get deeper into the wood than a blunter edge. However, assuming that the blunt edge has wider shoulders, the sharp edge will have a larger surface area in contact with the wood. So it will get stuck earlier.

I don't know if you wrote the above in response to Clay's remark on why a convex edge splits wood more easily. What I think Clay meant (but please speak for yourself, Clay) is that once a convex edge has made a substantial crack in the wood (the initial split), the shoulders of the convex edge aid in splitting the wood further apart.

But this does require that the edge of your edge is sharp enough to make the initial crack. Otherwise it doesn't only get the first few blows right on its head, but the remaining ones as well. And the wood doesn't get split.

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Re: What is the use of a convex edge
Posted by wickededge - 23 Jan 2013 15:31

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mark76 wrote:

I don't know if you wrote the above in response to Clay's remark on why a convex edge splits wood more easily. What I think Clay meant (but please speak for yourself, Clay) is that once a convex edge has made a substantial crack in the wood (the initial split), the shoulders of the convex edge aid in splitting the wood further apart.

But this does require that the edge of your edge is sharp enough to make the initial crack. Otherwise it doesn't only get the first few blows right on its head, but the remaining ones as well. And the wood doesn't get split.

Exactly. The sharp edge initiates the crack, the shoulders force their way in and begin splitting the material.

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Re: What is the use of a convex edge

Posted by mark76 - 25 Jan 2013 06:16

Hey guys,

I turned my above post into a blog entry. You can read it here .

I corrected one error (about why a convex edge doesn't dull slower - you have to keep sharp). But for the rest I just tried to formulate things a bit sharper. And the verdict is:

A convex edge...

- √ is thousands of years old
- √ is marketing
- × is stronger
- × dulls slower
- √ doesn't wedge
- × cuts better than a multi-beveled edge

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Re: What is the use of a convex edge

Posted by PhilipPasteur - 26 Jan 2013 21:00

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wickededge wrote:

Exactly. The sharp edge initiates the crack, the shoulders force their way in and begin splitting the material.

I think this same sort of think is going on with the wedging that Mark talks about with food prep.

This is caused more because of the blade design above the bevel than the edge of the edge. A thick tall knife will wedge regardless of having a few thosandths of the leading edge use a V or a convex. After the edge breaks the surface and penetrates the surface for a small distance, the shoulders of the blade are pushing out enough that the edge may not even be in contact with the material... hence, wedging occurs.

A thinner blade with a hollow grind will cause less wedging than a convex grind blade, regardless of the profile of the edge of the edge.

Phil

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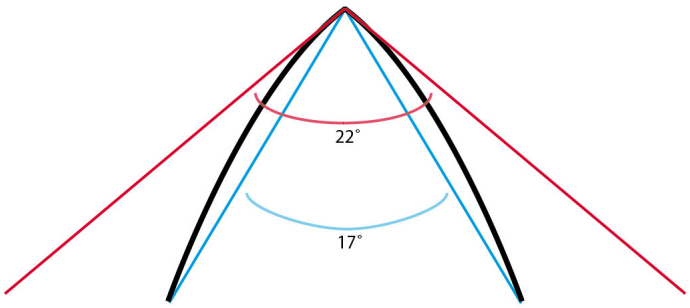
Re: What is the use of a convex edge

Posted by mark76 - 15 Feb 2013 05:36

I made an update to my blog post. I added some pictures to illustrate why claims like "a convex edge is stronger" are rather meaningless when one omits the angles.

Like:



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Re: What is the use of a convex edge
Posted by Geocyclist - 15 Feb 2013 19:42

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Mark,

Thanks for drawing this. This simple diagram says quite a lot in a few words.

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Re: What is the use of a convex edge
Posted by KenBuzbee - 16 Feb 2013 08:22

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Geocyclist wrote:

Thanks for drawing this. This simple diagram says quite a lot in a few words.

It does. It also points out that I need to find a (testable) definition of "sharp". I mean, I kinda know it when I feel it but there are illusive things I can't explain, define or defend. Like why my M4 Bradley "feels" sharper than any other knife I own.

Ken

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Re: What is the use of a convex edge
Posted by mark76 - 16 Feb 2013 16:27

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KenBuzbee wrote:

It also points out that I need to find a (testable) definition of "sharp". I mean, I kinda know it when I feel it but there are illusive things I can't explain, define or defend. Like why my M4 Bradley "feels" sharper than any other knife I own.

This makes me think of how the ISO defines quality: fitness for purpose. Very true, but rather difficult to make operational.

For a practical approach, try Dan's site: www.howsharpisit.com/

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Re: What is the use of a convex edge

Posted by KenBuzbee - 16 Feb 2013 17:42

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Agreed!

I love Dan's site. Haven't visited in a while, I need to head back over there.

Ken

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