

How to design and make a wood carving knife

by [morfmir](#) on August 25, 2009

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Intro: How to design and make a wood carving knife

I will show you how to make a wood carving knife with a minimum of tools.

This knife is perfect for carving the shrink cup in my last instructable

<http://www.instructables.com/id/How-to-carve-a-shrink-cup/>

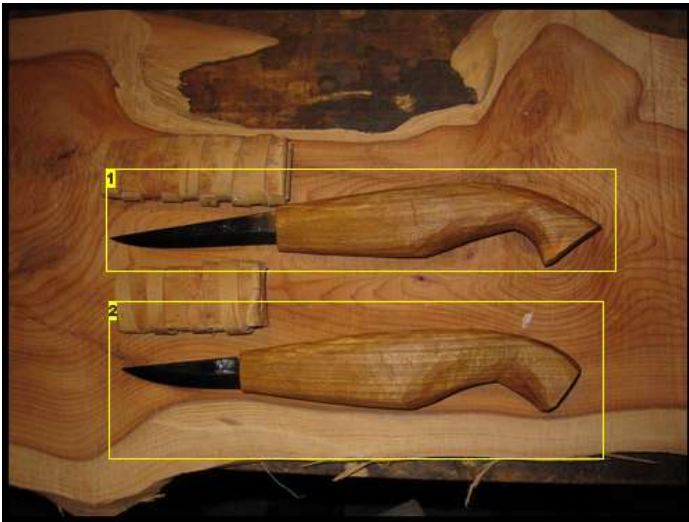


Image Notes

1. see how the oil brings out the rich color of the cherry wood.
2. I like the knifemarks on the handles, that way it is clear that the handles are handcarved. I use no sanding at all. Just the knife.

step 1: Tools needed

To make this instructable you only need simple hand tools that most of you already have.

You need a hammer, a saw, a file, a vice, an ax and a knife.

I also use a froe and a metal ruler that is nice to have but you can do with out them.

If you don't have a froe use a big knife or a ax to split the wood.

And as a substituted for a metal ruler use the backside of a saw.



Image Notes

1. Small and sharp hatchet.
2. heavy hammer
3. fine toothed metal file.
4. small carving knife.
5. plier



Image Notes

1. froe used for splitting wood

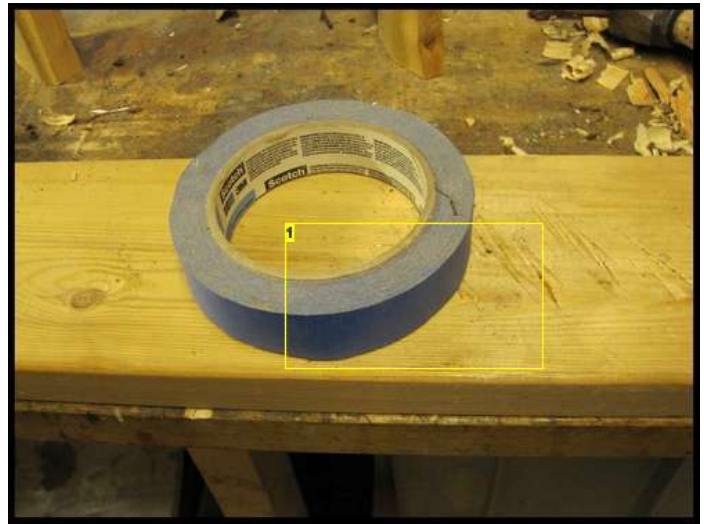


Image Notes

1. masking tape, to protect the blade and your fingers.



Image Notes

1. glue, used to glue the drawing to the handle.

step 2: The knifeblade

Of course you need a good knifeblade, I like the ones from Frosts Mora. They are cheap and very sharp. The ones I use in this instructable are KB120 and KB106. They are laminated blades with a very hard center and soft iron on the sides. Making the edge durable without making the blade fragile. The blades are slim, making them ideal for any kind of carving.



Image Notes

1. KB120, 60mm long
2. KB106, 82mm long



Image Notes

1. if you look very careful you can see the line showing the hard core steel and the soft outer layers.

step 3: The wood for the handle

I use green cherry wood for the handle. By using fresh/green wood I can hammer the blade directly into the handle. That way I don't need to drill holes for the blade, and there is no need for glue.

Other suitable wood for this ; Birch, Red Alder, Linden, Apple, Pear
Red Alder can even be used when dry, but the others need to be green.



Image Notes

1. this piece will be used for the handle.



Image Notes

1. approximately 15cm diameter.

step 4: Bark for the Sheath

This simple sheath are only used to protect the knife and the owner, it has no belt strop. It is woven from birch bark. It is very fast and simple to make but yet durable. The bark I use here are purchased but if you have access to trees in the right size you can just collect the bark your self.



step 5: Prepering the knifeblade

To be able to hammer the blade into the handle you first need to file the tang. The tang needs to be straight like a nail, not wedge shaped like it is from the maker. If you leave the tang wedge shaped the handle will split.

I use a hand file to do the job. But if you have a bench grinder you can use that. Just watch your fingers and that the blade don't get to hot.

Also cut the tang into length, it needs to be 5-6cm long. When you have cut the tang file the end so it is flat.

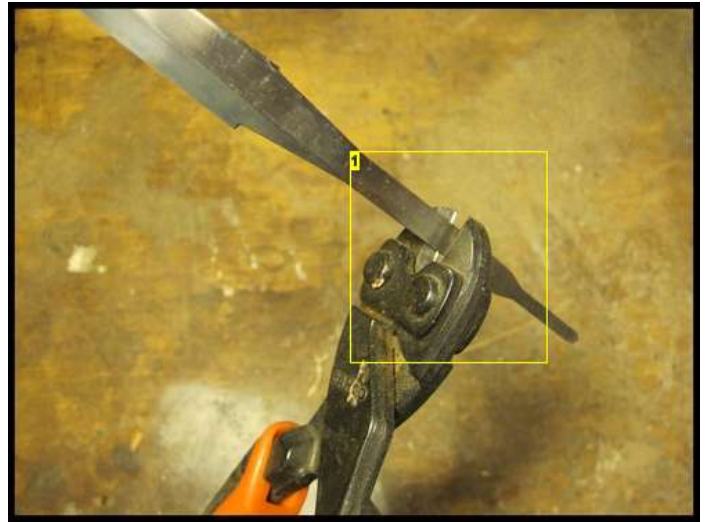


Image Notes

1. Use the plier or a hacksaw to cut the tang.

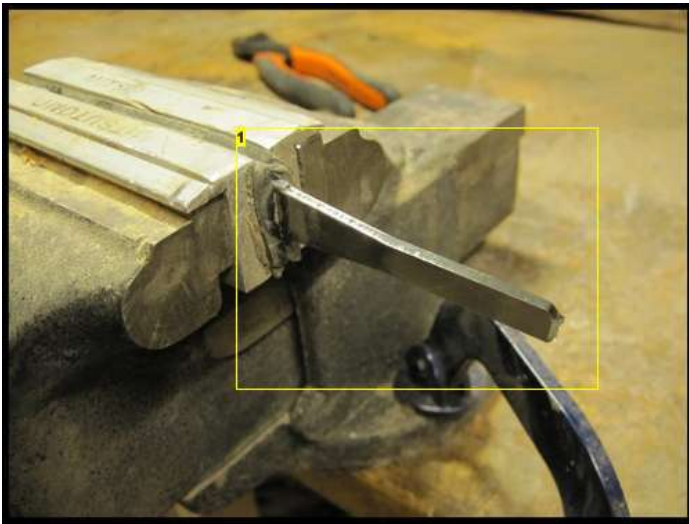


Image Notes

1. this is the right length, around 5-6 cm.

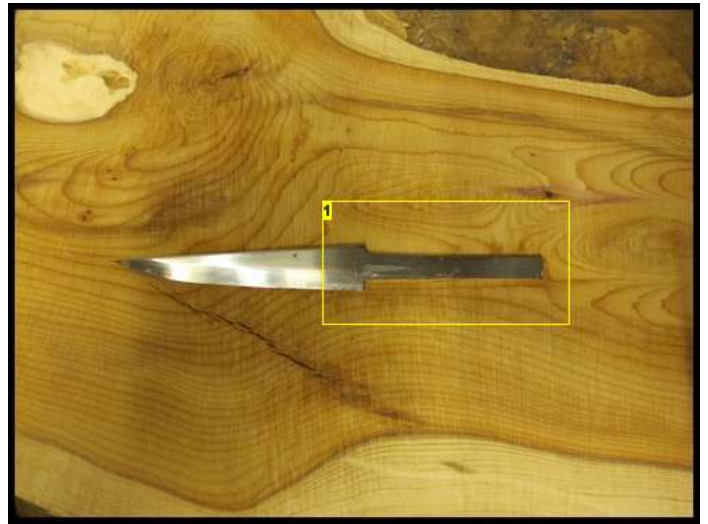


Image Notes

1. after filing the tang are straight.



Image Notes

1. both blades ready to be hammered into the handle. The tang are all straight and flat in the end.

step 6: prepering the wood

Cut a 15cm thick slice of your log. Split it a few times, and with the ax roughly cut the handle into shape.

Now fine shape the end that you plan to hammer the blade into. When the blade first sits into the wood it is very hard to work that area without damaging the blade and the edge of the carving knife.



Image Notes
1. split the log in the middle.



Image Notes
1. and one more time in the middle.

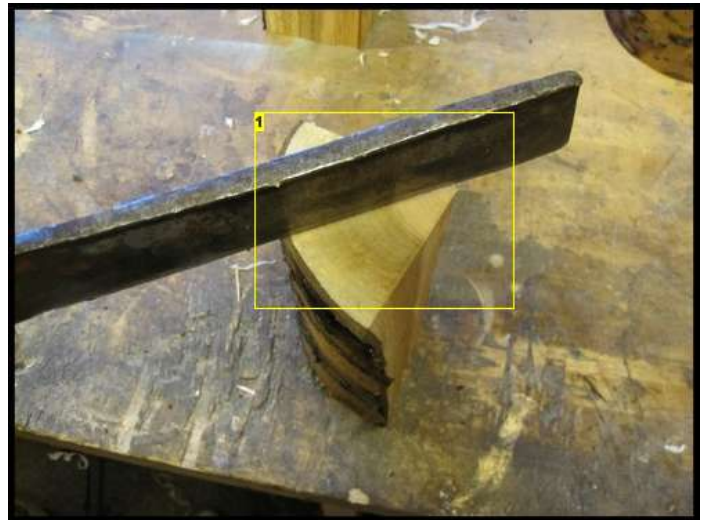


Image Notes
1. and one last time.



Image Notes

1. this log gives wood enough for 8 handles.

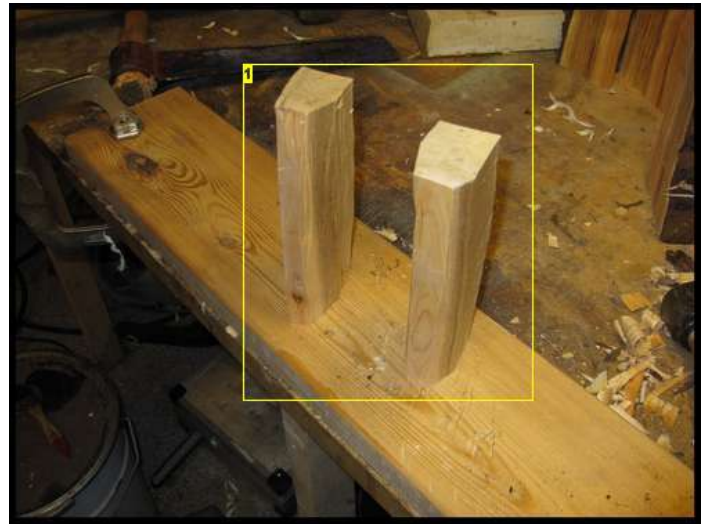


Image Notes

1. cut the wood into shape with your ax. The pieces need to be approximately 2X4X15 cm

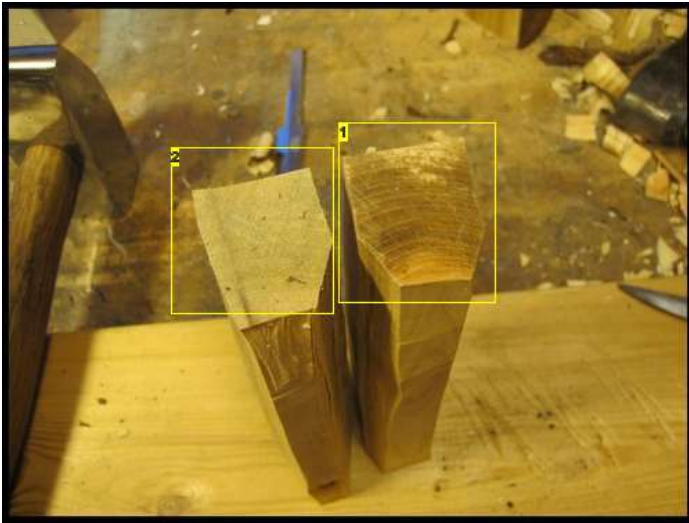


Image Notes

1. this is the end after fine carving. Ready for the blade.
 2. this is how the end looks like when it is raw before fine carving.

step 7: Hammer the blade into the handle

This part are a little difficult so take it easy and don't rush it. With care and patience you will be able to do it.

First clamp the blade very tight in the vice. Use soft jaws made from rubber, copper or other soft metals so you don't damage the blade.

Now place the handle on top of the tang, and with firm and controlled strokes drive the tang into the handle. All the time you need to be sure that the tang gos straight into the handle. To start with, when the tang's not to long into the handle you are able to correct the angle. But then it gets in deeper it is stuck. If the blade gets in wrong there are noting else to do than split the handle, remove it and start all over.

When the tang are all gone into the handle this step is over. The blade now sits firm in the handle and you will not be able for remove it again without breaking the handle.

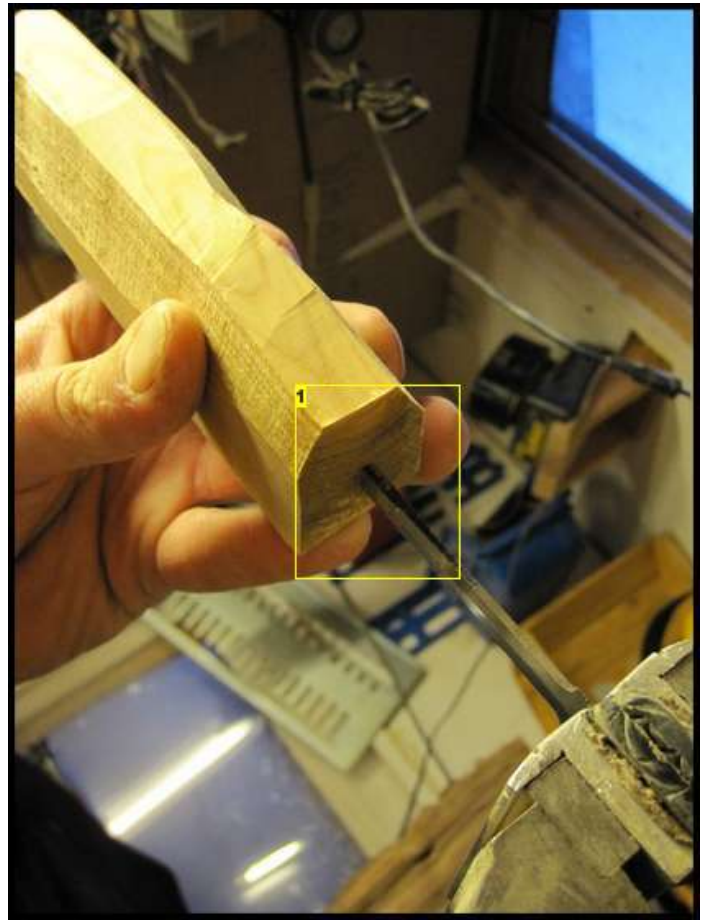


Image Notes
1. place it in the middle.

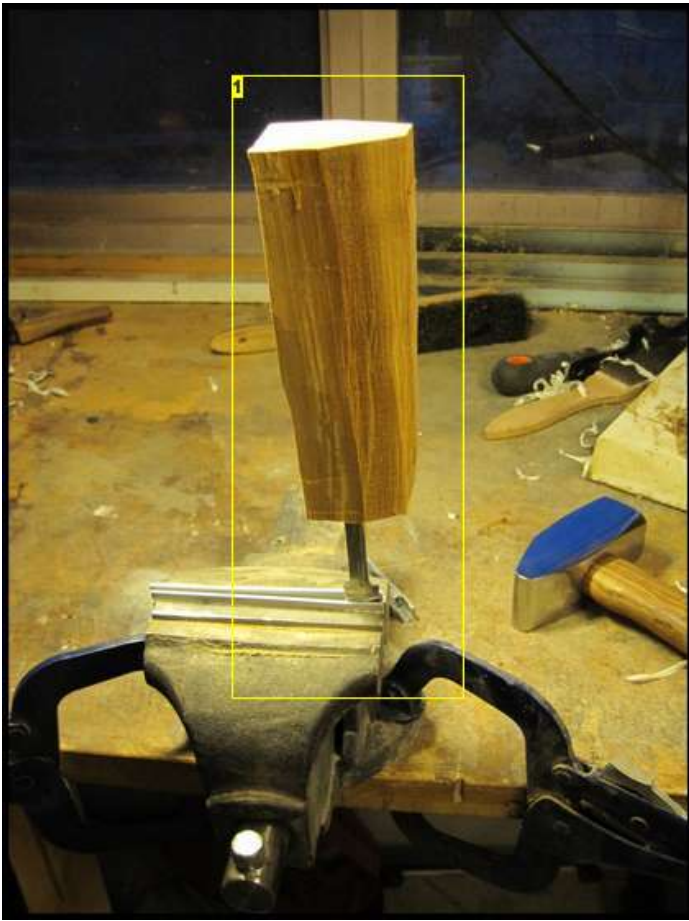


Image Notes

1. be very sure that the blade is driven correctly into the handle. To start with, when the tang is only 5-10mm into the handle you will be able to adjust it a little. So stop after a few strokes and adjust the handle if needed.

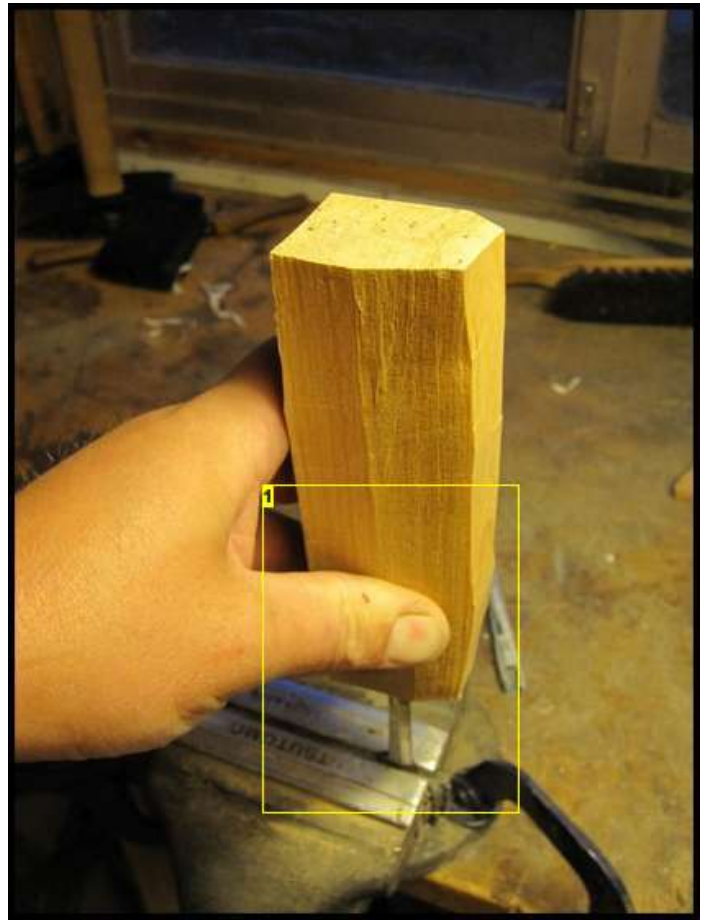


Image Notes

1. be sure it is aligned right.

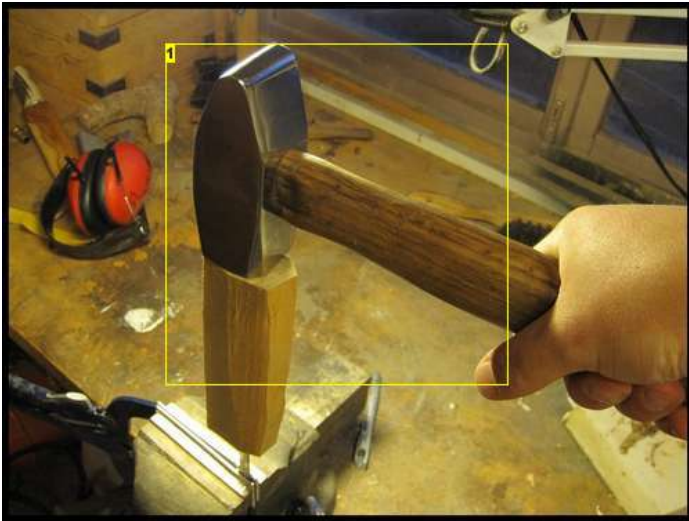


Image Notes

1. now beat it with firm strokes.

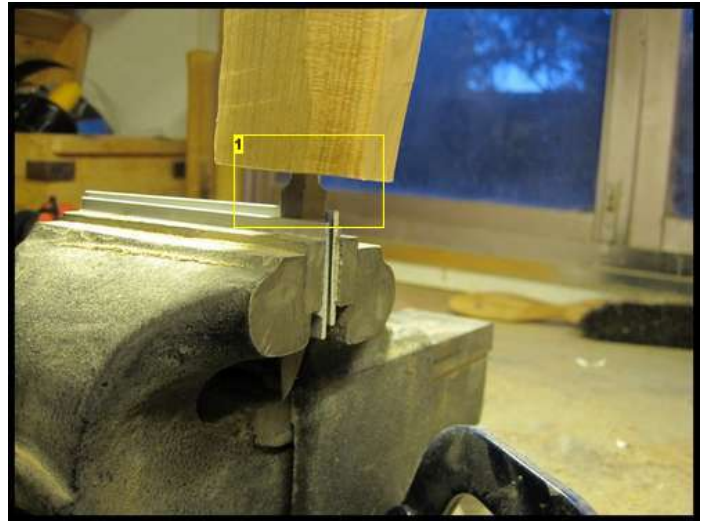


Image Notes

1. almost there.

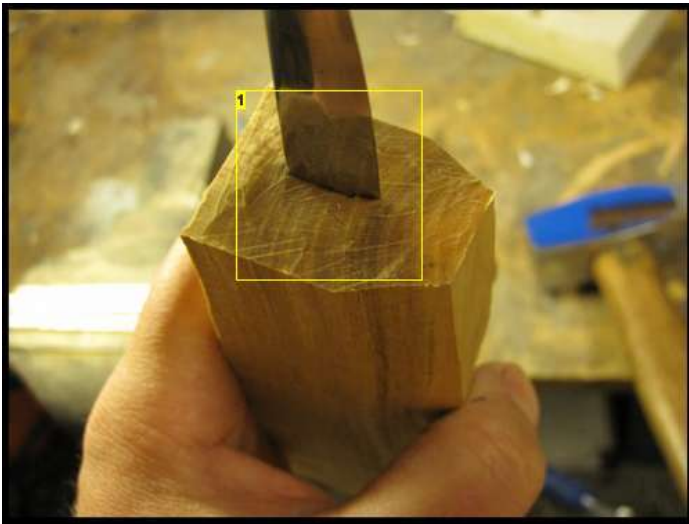


Image Notes

1. look how nice it fits. The bark color around the blade is the moisture from the wood that shows when the blade is driven into the wood.

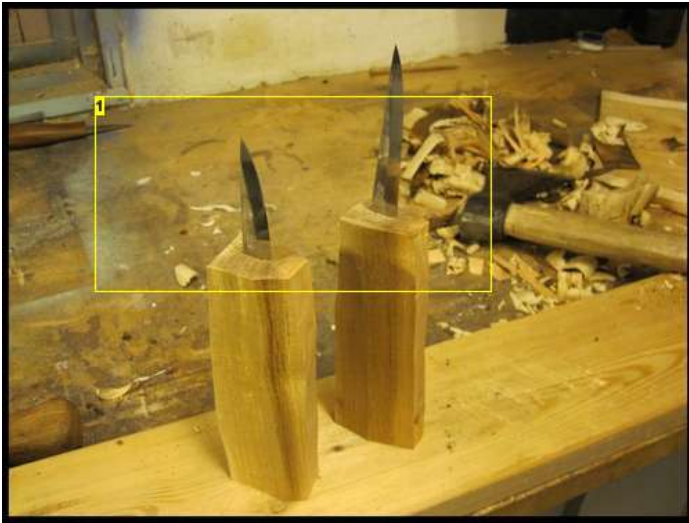


Image Notes

1. both blades sitting firm in there handle.

step 8: Designing the handle

Now take some paper and draw the shape of the blade and the handle.

When you design a handle you need to think of it as a fish. The fish have 3 parts, the head, the stomach and the tail.

- 1: start by dividing your handle into 3 parts.
- 2: Now draw a fish in it.
- 3: Can you see the handle inside the fish?
- 4: Continue until you have converted your drawing of a fish into a handle.
- 5: draw the handle from the side and from the top.
- 6: glue the drawing onto the handle.

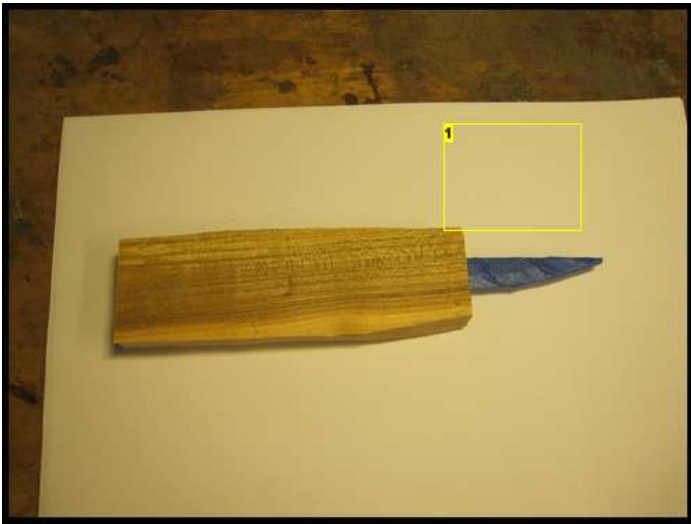


Image Notes

1. the handle on a piece of paper.

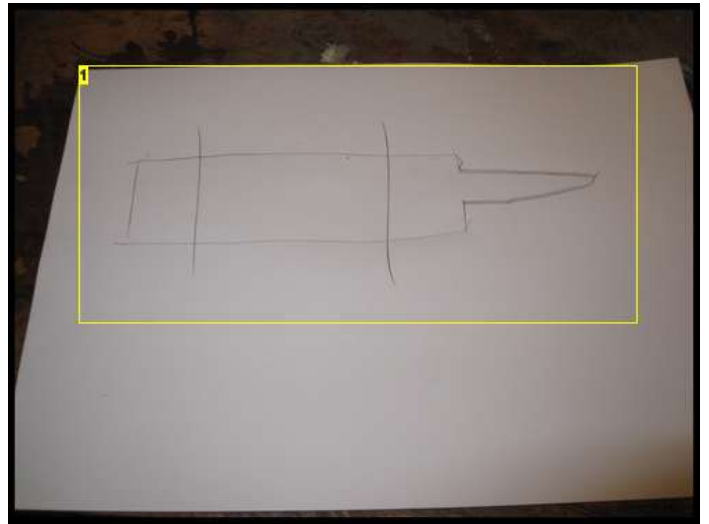


Image Notes

1. this is the outline of the knife.

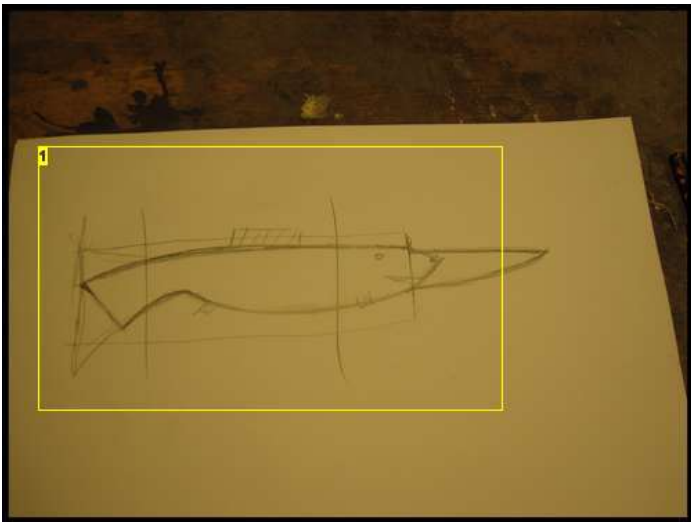


Image Notes

1. look a fish :-)

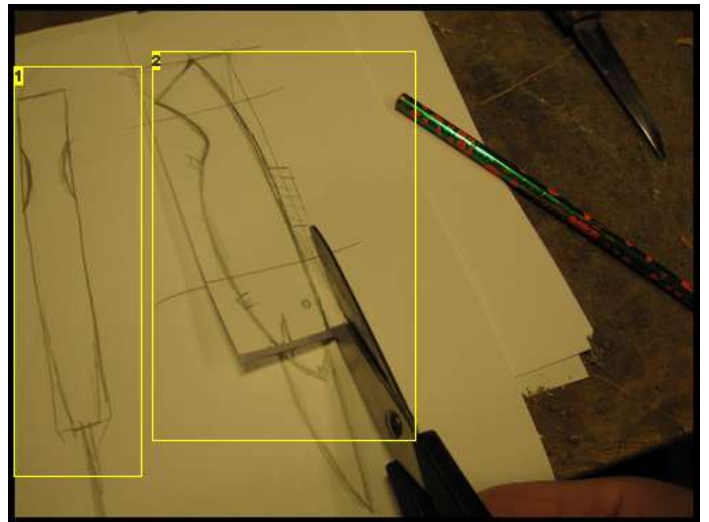


Image Notes

1. from the top.
2. cutting the drawing of the side view.

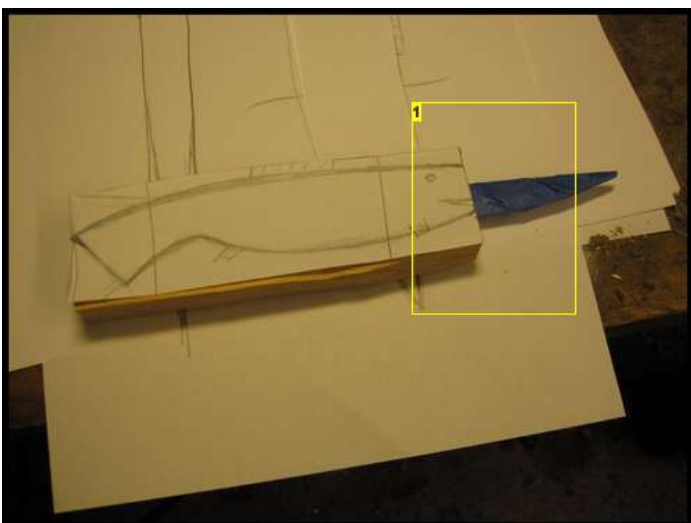


Image Notes

1. dry fitting.

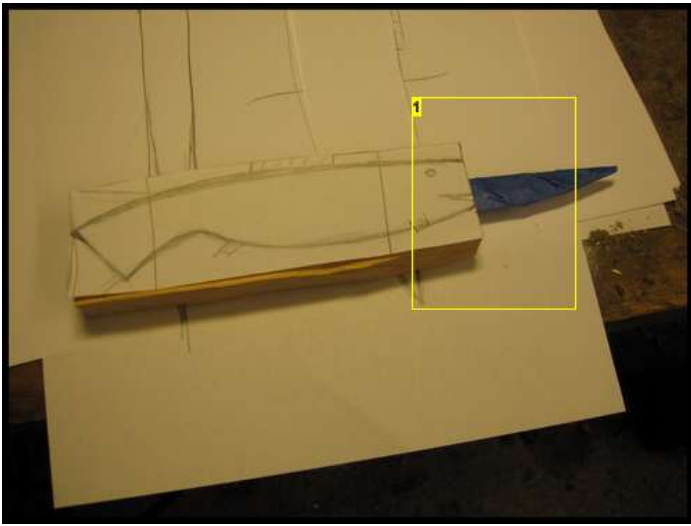


Image Notes
1. normal white glue.

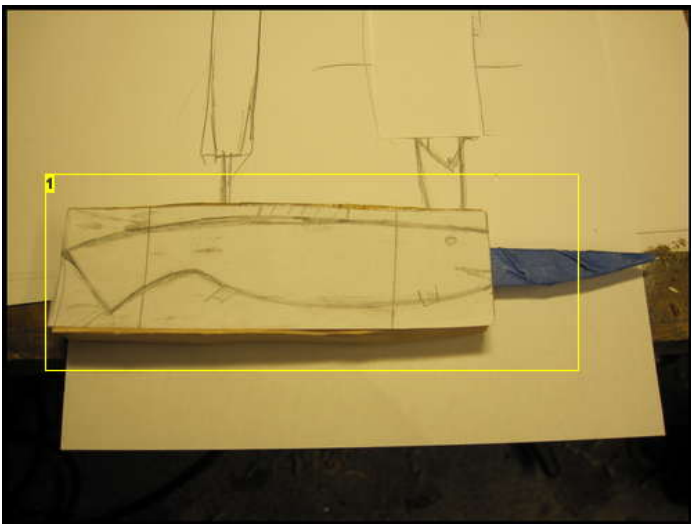


Image Notes
1. now the drawing is glued to the handle.



Image Notes
1. when you get more experience you dont need the paper drawing. You can just draw directly on the handle.

step 9: Shaping the handle

Before you start for shape the handle you shall cover the blade with tape. To protect the blade and your fingers. I use masking tape that is easy to get of when the knife is finished.

Now start cutting away the wood outside the drawing. If your skilled enough you can start with an ax to do the rough shaping, and then using the knife for the final carving.

When your have cut all the way to the line of your drawing start to round the edges. When your cutting away, specially when rounding the edges you still have to think about a fish. The handle needs to be round and smooth like a small trout in the water.

Here is a film showing how to shape the handle with the ax. Sorry about the camera angle, maybe I need a tripod :-)



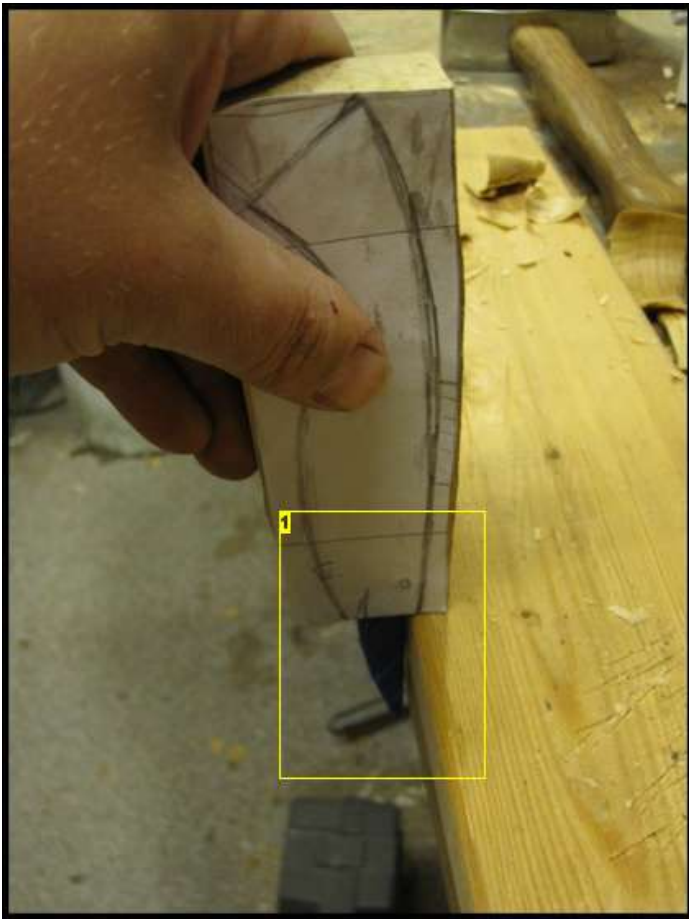


Image Notes

1. when using the ax place the handle on a sharp edge.

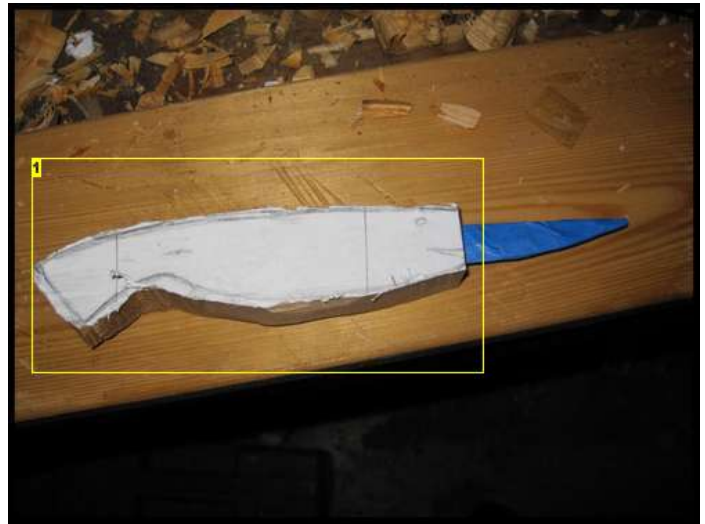


Image Notes

1. the rough shaped on one side.



Image Notes

1. finished rough shaping both handles.

step 10: The finished knife

Now the knife is finished and ready to use. If you don't like the rough expression from the carving knife you can sand the handle as smooth as you like. It is best to leave the greenwood to dry before sanding.

But no matter if you want to sand or not, you leave the handle to dry 1-2 weeks. Don't leave it in the sun or in a very dry or hot place that can make it crack.

When the handle is dry, sanded or not, apply oil. I use linseed oil or danish oil depending on how fast I want to finish the knife. If I use danish oil the knife will be usable in a day, with the linseed oil it has to dry for 2-3 weeks. But I like to use linseed oil because it is a natural product without any additives, so it is more safe for me and the environment.



Image Notes

1. here you see the finished handle from different sides. Note the fish shape ;-)



Image Notes

1. side by side like two twin sisters.



Image Notes

1. unmasked and ready to use.

step 11: Making the sheath

Start by cutting a big strip of bark. It needs to be 3 times wider than the blade and 4.5 times longer than the blade. Then cut 2-3 thin strips of bark, cut them 3-5mm width. Trim the strips from loose moss and loose outer bark. Bend the wide strip of bark and weave the thin strips around it. Continue until there's no more room and cut the end.

Here is a film showing how I weave the sheath.

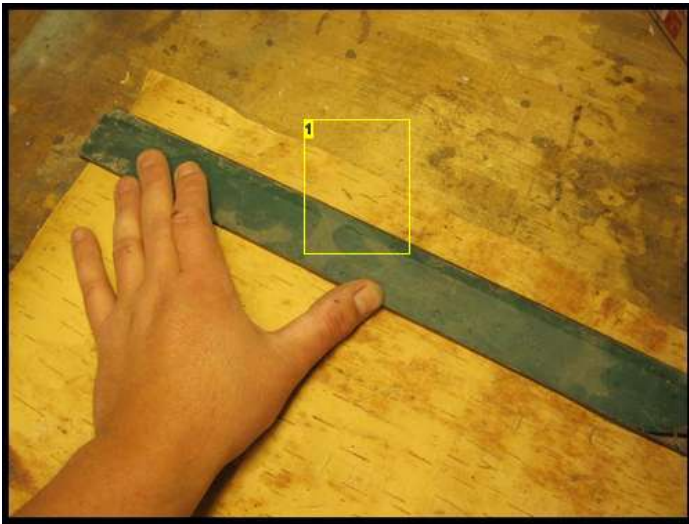


Image Notes
1. 30mm wide.

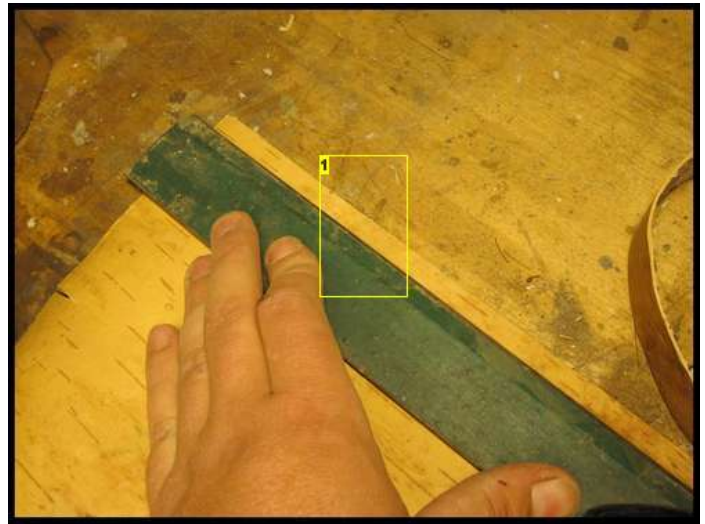


Image Notes
1. 4mm wide.



Image Notes
1. all the stripes for the two sheaths.



Image Notes
1. mete the length for the first bend.



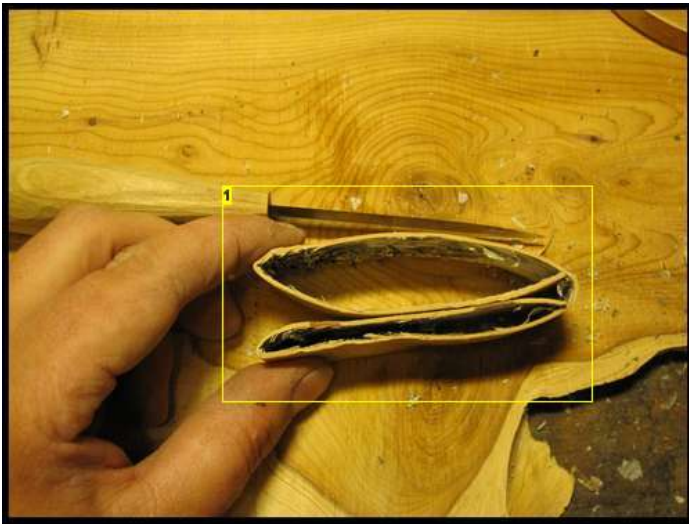


Image Notes

1. four times the length of the blade.

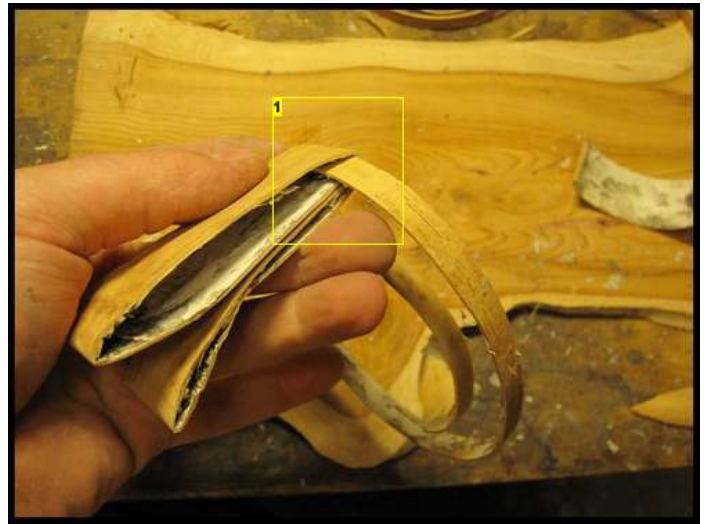


Image Notes

1. put the first thin strip inside the bended strip.

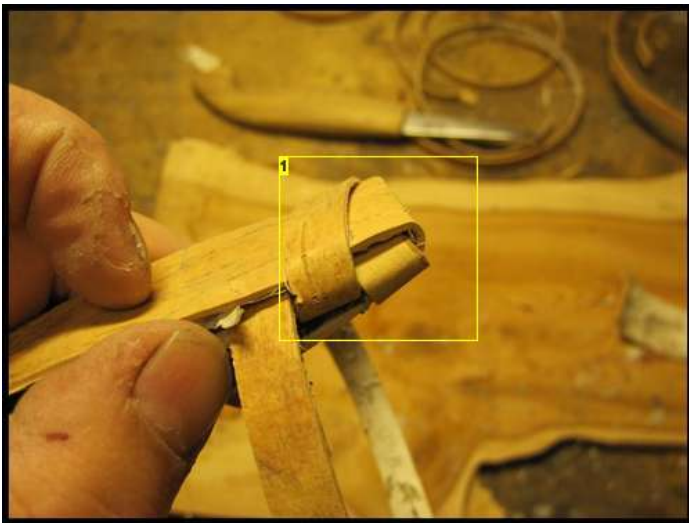


Image Notes

1. tie the thin strip around the wide one.





Image Notes

1. if the thin stripe isn't long enough cut it.



Image Notes

1. and put in a new one on top the other.

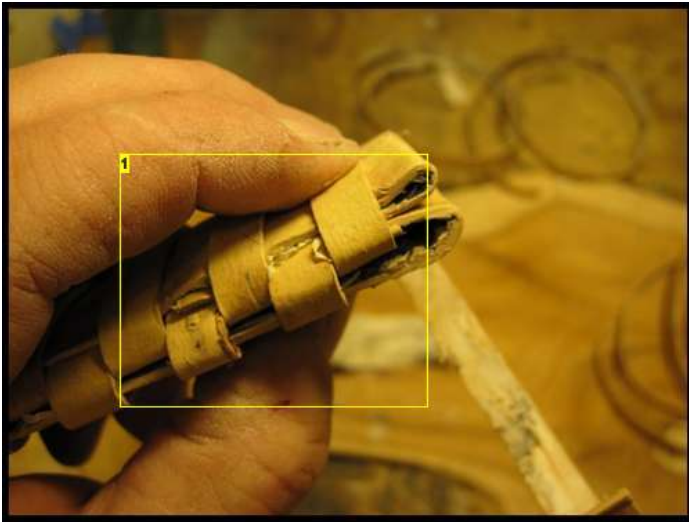


Image Notes

1. here the patten are very clear. One turn outside, then one inside and so on.



Image Notes

1. in the end cut the thin strip into a very small strip.



Image Notes

1. stick it into the last small gap.

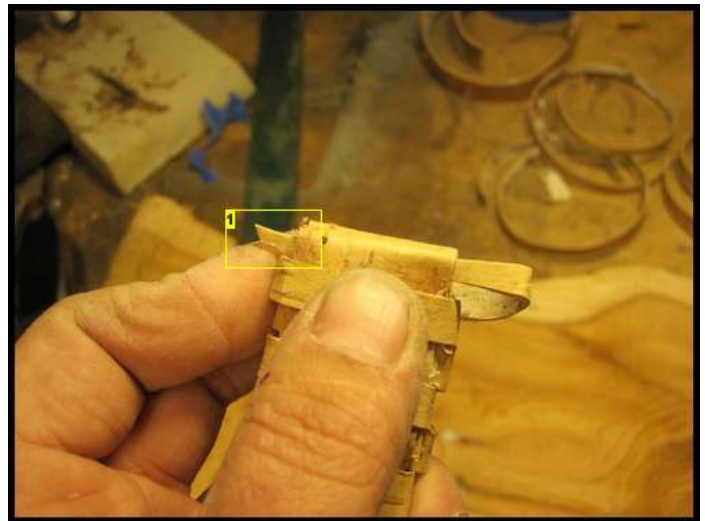


Image Notes

1. pull it through.

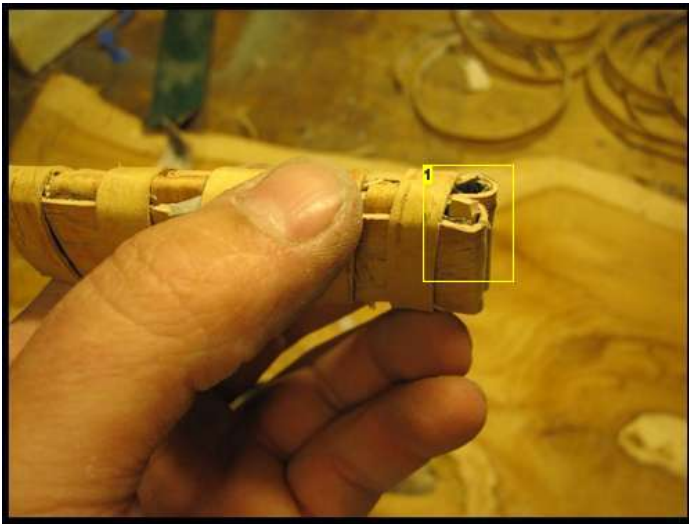


Image Notes
1. now cut it.

Image Notes
1. the knife in the sheath.



Image Notes
1. both knives with sheath.

step 12: Oiling the handle

To protect the handle against stains and dirty fingers I treat the wood with oil. I take the easy way out and just dips the handle into my drum of linseedoil.



Image Notes

1. this is a vary good oil for dry wood. But I don't use it on green wood. It is very fast to use, dries to a shiny surface ready for polishing within an hour. This is my favorite on all handles made for dry wood.



Image Notes

1. my drum of linseedoil. 30 lites.



Image Notes

1. Chinese tung oil. Good as adjective to linseed oil, makes it harden faster.



Image Notes

1. just dip it in. That way I'm sure the oil will cover it all.

step 13: The finished knives.

After a day or two the oil have dried and the knives don't feel greasy. The oil isn't all hardend but if you want the knives are ready to use.

Now you can enjoy your carving knives, and they will be your faithful companions for many years.

I hope you enjoyed reading this instructable just as much as I enjoyed writing it.

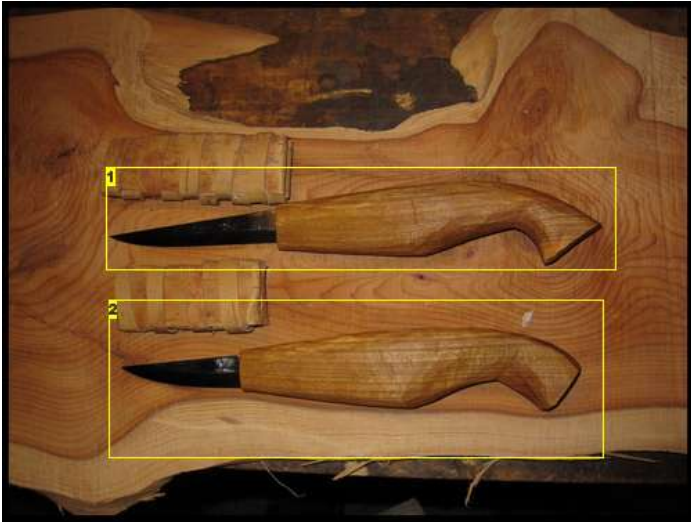


Image Notes

1. see how the oil brings out the rich color of the cherry wood.
2. I like the knifemarks on the handles, that way it is clear that the handles are handcarved. I use no sanding at all. Just the knife.

step 14: Other handcarved knifehandles

The end of the handle is ideal for carving. If you like to make your knife very special you can carve something in the end of the handle. Here you can see some examples that I have made.







Related Instructables



Crooked Knife
by TimAnderson



How to carve a sword
by morfmir



how to make a knife for bark carving
by pumpkinman



How to Carve a Wooden Knife
by Thelonelysandwitcl



Simple Gravestone
(slideshow) by noahh



How to make a wooden spoon, the viking way
by morfmir



My wooden sword
(slideshow) by CrazyKnife1



Precision Pumpkin Carving
by jeff-o

Comments

49 comments

[Add Comment](#)



kingalex1 says:

is there a reason why they come in a wedge shape instead of straight?

Oct 10, 2009. 1:07 PM [REPLY](#)



Caym says:

It has to do with the process of heat treating. If it was straight the metal would have a high chance of cracking thus rendering the blade useless

Nov 3, 2009. 11:59 AM [REPLY](#)



kingalex1 says:

oh. okay. that makes sense. thanks.

Nov 3, 2009. 8:29 PM [REPLY](#)



JavaNut13 says:

I made this one at school, along with a chisel.



Oct 10, 2009. 8:20 PM [REPLY](#)



Ron-Ray says:

Pic #3: "Twin Sisters" :-) ... I like that!

RE: "adjectives"... THEY know what you mean. Some people just can't stand to just watch, read, listen, learn- and ENJOY. They want to be the main attraction...

They really know that you owned them by making this great series and they could never do what you have done here. They're called "Trolls", because they 'fish' (troll) around comment sections trying to cause mayhem with their **wtf** , **omfg** , **lmao** , and other acrid acronyms and inserting mean and vicious comments. They are the "boils on the backsides of the Internet"!

Sep 27, 2009. 11:31 AM [REPLY](#)



Don,t try this at home says:

What kind of bark did you use and were did you get it.

Sep 20, 2009. 9:16 AM [REPLY](#)



morfmir says:

It is birch bark. I bought it from a Danish webshop
<http://linaa.dk/shop/birkebark-tynd-til-293p.html>

If you have access to a suitable tree you can harvest the bark your self.

/Thomas

Sep 20, 2009. 10:31 AM [REPLY](#)



thepelton says:

Birch doesn't grow in southern Colorado, USA. We have Elm, Cottonwood, Aspen, Scrub Oak and various softwoods (evergreens). Any possible substitutes among those?

Sep 21, 2009. 1:24 PM [REPLY](#)



Ron-Ray says:

@ thepelton: Birch grows in several of the north-western states here in the US. I think some even grow in northern Colorado. Check on some of the on-line wood supplies... It should be pretty easy.

It definitely doesn't grow here in Alabama, but I can either buy it on-line or substitute something else for it.

I believe this guy could make a knife handle from 'news paper', he's so good! :-)

Sep 27, 2009. 12:47 AM [REPLY](#)



Ron-Ray says:

I can tell that you've used that hatchet a long time. You really know what you're doing!

I've been to many sites, looking at many home-made knives and I have to say that you are truly one of the better knife makers! You are a "natural"! Start your own forging and you have a business!

Sep 26, 2009. 11:34 PM [REPLY](#)



pumaplayr17 says:

hey so i was thinking about trying this one out, but i dont woodcarve. i was wondering if the same technique of attaching the blade to the handle would work on a bigger scale like a hunting knife? thanks

Sep 23, 2009. 4:47 PM [REPLY](#)



morfmir says:

You can do it with all kinds of knives, You just need to do step 5 if the tang isn't the right shape.

/Thomas

Sep 24, 2009. 8:29 AM [REPLY](#)



fluent says:

That is stinkin' awesome. How long have you been making knives?

Sep 17, 2009. 11:20 AM [REPLY](#)



morfmir says:

Thanks, I have been making knives for some years. My favorites are simple handmade knives like the ones in this instructable.

Sep 17, 2009. 12:11 PM [REPLY](#)

/Thomas



fluent says:

Indeed. Well done! I think you've inspired a bunch of us out here ;)

Sep 17, 2009. 11:26 AM [REPLY](#)



nomadic bowman says:

I totally agree

Sep 4, 2009. 2:16 PM [REPLY](#)



nomadic bowman says:

wow the handles look really nice

Sep 4, 2009. 2:09 PM [REPLY](#)



oldanvilyoungsmith says:

I read here, <http://www.ragweedforge.com/mount.html>, that if you use antler you can soak it in vinegar for 6-12 weeks, then it will be soft enough to just push the tang right in.

Sep 3, 2009. 12:05 PM [REPLY](#)



gunrunner says:

you might try making blades out of saw-zaw or reciprocating saw blades.

Sep 3, 2009. 11:25 AM [REPLY](#)



Thav says:

Great instructable. I'm especially curious to get home out my work's firewall and watch the axe shaping video.

Sep 2, 2009. 9:19 AM [REPLY](#)



survivalist says:

wtf "a natural product without any adjectives" sorry but doesn't make sense

Sep 2, 2009. 3:20 AM [REPLY](#)



morfmir says:

By adjectives I mean no chemicals just pressed linseeds.

Sep 2, 2009. 7:36 AM [REPLY](#)

/Thomas



SinAmos says:

I wanted to like this, but I'm not sure. I have to consider some issues because of the nature of the blades. See, I have one of those interchangeable carving knives, and I'm not sure what the benefits are. Good work though.

Sep 1, 2009. 3:39 PM [REPLY](#)



morfmir says:

There are a lot of different techniques involving carving. Some techniques you use very small knives in different shapes. I guess that is the one you have. And some uses different chisels. This knives are the ones I use when carving things like spoons, buttering knives, shrink cups and other wooden things.

Sep 1, 2009. 11:01 PM [REPLY](#)

/Thomas



thepelton says:

I know that www.woodcraft.com has blades for home knifemakers. Not sure if they have them for carving tools, but it sounds logical, since they sell the finished tools.

Sep 1, 2009. 5:53 PM [REPLY](#)



vhcl says:

Very Nice!!

One of the best Instructables I have read so far.

Thanks :-)

Sep 1, 2009. 4:27 PM [REPLY](#)



dagenius says:

Very nice. I love the techniques that you put on here.

Sep 1, 2009. 3:23 PM [REPLY](#)



pineapplenewton says:
I'd be done at step 7

Sep 1, 2009. 3:12 PM [REPLY](#)



Don,t try this at home says:
Were did you get the blades at.

Aug 30, 2009. 6:28 PM [REPLY](#)



morfmir says:
There are a lot of online knifemaking shops located here in Denmark. This time I bought the blades her
http://www.laederiet.dk/Produkter/Vistyper_engelsk.asp?id=28&Uid=51
I don't know if they send international.

Aug 30, 2009. 10:55 PM [REPLY](#)



Don,t try this at home says:
Good deals 4 USD for one i hope the ship to America. here they cost 20 bucks for a good one.

Aug 31, 2009. 11:59 AM [REPLY](#)



morfmir says:
The price is in euro but it is still cheap. 4 euro=6\$
/Thomas

Aug 31, 2009. 12:18 PM [REPLY](#)



Pyro the maniac says:
Hey great instructable but i have 2 questions
wont that split the handle?
does it make it easier to drill a very small pilot hole so it goes in straight?

Aug 31, 2009. 11:56 AM [REPLY](#)

Also i heard of a method where you heat up the tang and then it sort of burns the hole is this a good or bad idea?
thanks



morfmir says:
If you prepare the tang like I show it won't split. If the tang is wedge shaped it will surely split the handle. No need for at pilot hole it will only be in the way. Just go slow and hammer tghe tang in precise.

I have tryed the burning method, and I must say that that is a lot of ekstra work for nothing. The method I show here are far better with less work, and without the risk of destroying the blade caused by overheating.

Aug 31, 2009. 12:14 PM [REPLY](#)

/Thomas



Pyro the maniac says:
In canada and the USA you can get them from lee valley

Aug 31, 2009. 11:50 AM [REPLY](#)



tevers94 says:
thanks for this instructable, it's just what i was looking for.

Aug 31, 2009. 11:00 AM [REPLY](#)



Holden_vy_s says:
Wow, you are really good with an axe, do you do this sort of thing for a living?
Great job.

Aug 31, 2009. 3:46 AM [REPLY](#)



morfmir says:
I'm a teacher of viking skills at the site Land of Legends in Lejre. You can see some film from the place here.

Aug 31, 2009. 9:02 AM [REPLY](#)

www.sagnlandet.dk

/Thomas



fool2cool says:

Aug 31, 2009. 5:56 AM **REPLY**

Are you sure its safe to swing an axe towards your hand like in the video? I was always taught not to cut towards myself but rather away so if you slip you wont end up loosing a hand, but i spose if your experienced you can control where the axe goes.



morfmir says:

Aug 31, 2009. 8:49 AM **REPLY**

It is a questions about experience. I don't think about it, but if your not sure you can do it safe let it be. It is perfectly possible to make the handle with out that step, just cut it with a saw or with a knife.

/Thomas



roblin90 says:

Aug 31, 2009. 6:22 AM **REPLY**

Very nice indeed, a most excellent instructable.



i make shooting things says:

Aug 30, 2009. 6:38 PM

(removed by author or community request)



morfmir says:

Aug 30, 2009. 11:02 PM **REPLY**

I'm not a kid, and I like to come here to learn and to share.



loppy96 says:

Aug 30, 2009. 7:09 PM **REPLY**

hey man there is a "be nice" comment policy here



i make shooting things says:

Sep 1, 2009. 11:08 AM **REPLY**

That came off the wrong way.

I wasnt suggesting to take it off or stop posting stuff like this here.

I was just suggesting you could post a link on knifecollector.com to get this out to a more target audience, Its a pretty new and its growing fast.



lopyy96 says:
ok sorry i miss understood u

Sep 8, 2009. 7:14 PM [REPLY](#)



LuminousObject says:

Oooo. Those look really nice. Might have to make one of these. Do you think it would be possible to make quality knife blades yourself?

Aug 30, 2009. 7:27 PM [REPLY](#)



morfmir says:

It is easy to make a blade... But it takes a lot of skills to make a good blade. I don't have the skills to make a blade good enough to compete with a quality blade like the Mora ones.

Aug 30, 2009. 10:58 PM [REPLY](#)

/Thomas



mynameisjonas says:

of course! you can make knives pretty easily. try using old leafsprings, files, or saw blades. you'll have to cut them to shape, grind them and heat treat them. another alternative would be to forge them, but that requires a lot of work to set up. you can learn more at your local library, google, or <http://www.primitiveways.com/pt-knives-1.html>

Aug 30, 2009. 7:43 PM [REPLY](#)
