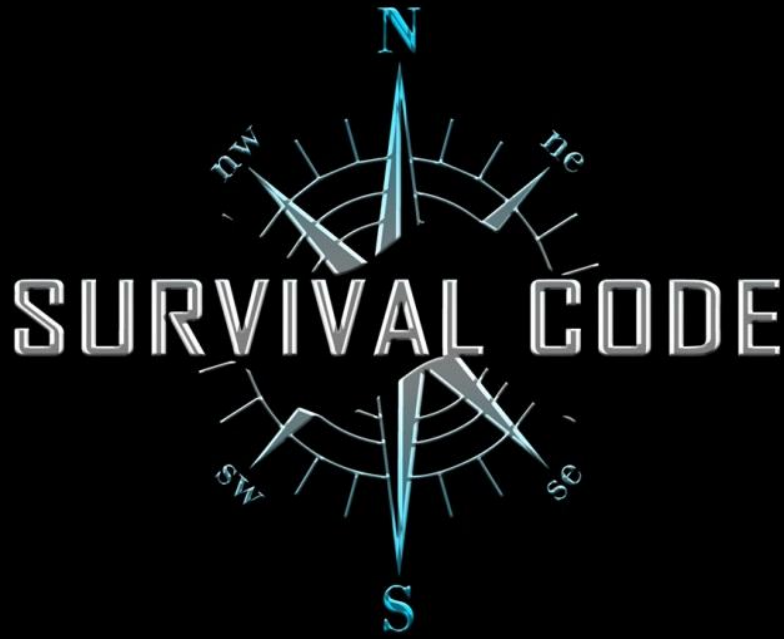


WEAPONS



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WEAPONS

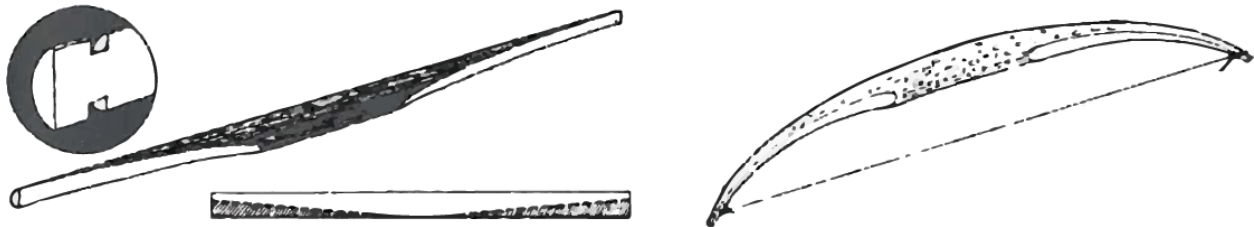
To determine the correct stave length for you:

Hold one end of the stave at the hip with the right hand, reach out sideways with the left hand and mark the extent of your reach as the length of the bow.

This will give you a standard type bow (the longbow requires much more skill in use).



Shaping the bow



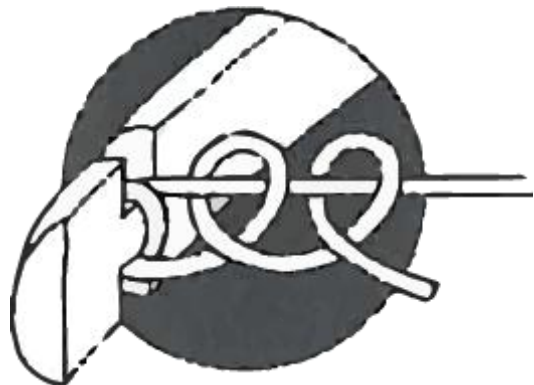
Fashion the stave **so** that it is 5cm (2in) wide at the center, tapering to 1.5cm ($\frac{5}{8}$ in) at the ends. Notch the ends (a) to take the bowstring about 1.25cm ($\frac{1}{2}$ in) from the ends. Remove the bark if you choose. When the bow has been whittled into shape rub it all over with oil or animal fat.

Fitting the string

A rawhide string is best, cut to a width of 3mm ($\frac{1}{8}$ in), but any string, cord or thin rope will suffice. The stems of old nettles provide tough fibers and these can be twisted together to make a satisfactory bowstring. If the bow has a lot of give a shorter string is likely to be needed, but when strung the string should only be under slight tension - the main tension is added when you pull it back to shoot.

Secure the string to the bow with a round turn and two half hitches at each end. If the wood is unseasoned release one end of the string whenever the bow is not in use to relax the tension or you may find the stave sets in shape.

A properly made bow will be more efficient and more accurate than just bending a pliable wand - but once it loses its spring don't waste time with it. Make another.



Making arrows

Any straight wood will do for arrows, but birch is one of the best. Make arrows about 60 cm (2ft) long, and about 6mm (1/4in) wide. Keep them straight (a piece of string tied between two points will give you a straight edge to check them against) and as smooth as possible. At one end make a notch 6mm (1/4in) deep to fit the bow string.



Check that the notch in the end of each arrow is wide enough to fit over your bowstring.

Flighting arrows



To increase accuracy arrows should be flighted. Feathers make the best flights but other materials can be used: paper, light cloth or even leaves trimmed to shape.

Split feathers, starting from the top, down center of quill. Leave 20mm (3/4in) of quill at each end of feather to tie to arrow. Tie three flights equally spaced around shaft.

Arrow heads

At the business end of the arrow a sharp point is needed. The arrow itself can be sharpened and hardened in fire but a firm tip is better. Tin is excellent or flint can be fashioned into a really sharp arrowhead. With patience even bone can be made into a good tip. Split the end of the shaft, insert the arrow head and bind it tightly. Sinews are good for binding - apply wet, they dry hard securing the head firmly.

WEAPONS FROM FLINT

Arrow and spearheads, axes and knives can all be made by knapping flint, which is a black stone with a dull metallic gleam, often found in association with chalk. Choose a flattish piece of approximately the right shape and size. With another hard stone flake off pieces until it is the shape you want. Chip away at the edges to produce a very sharp cutting edge (see **Tools** in **Comp Craft**).



Archery technique

Fit an arrow into the bowstring and raise the center of the bow to eyelevel. Hold the bow just below the arrow, extending the arm forwards. Keep the bow arm locked and draw the string smoothly back across the front of your body, with the arrow at eye level, and lined up with the target, sighting along the arrow. Release the string just let go, do not snatch at it as you do so. Now, practice! For rapid fire carry a number of arrows in your bow hand.

ARROW BURNS

Many archers find that the rubbing of the arrow flights against the hand and the cheek can cause friction burns. A scarf or a piece of cloth pulled tight to the face will protect the cheek without interfering with the shot and either a leather mitten worn, or a leather guard fitted between the fingers and the wrist, to protect the hand.

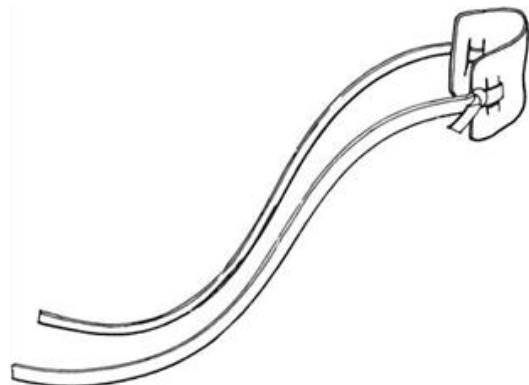


Sling and shot

The simple sling was the weapon with which David slew the giant Goliath and can be armed with ordinary pebbles. It consists of a simple pouch in the middle of a length of rope. Leather is the best material for the pouch but you could make it from any strong fabric and the rope can be a leather thong or twisted from natural fibers. Attach it as one long piece threaded through, or two tied or sewn on.

SLINGSHOT TECHNIQUE

Select smooth pebbles about 2cm Pfcin) across and as round as possible (jagged pebbles might do more damage but they will not follow such a smooth trajectory). Swing the sling above the head in a circle lined up on your target. Release one end of the rope and the ammunition should fly with great velocity and, with practice, accurately on target. You will probably need to experiment with sling length to achieve accuracy and distance.



When using either the sling or catapult against birds, load the several pebbles at once.

Catapult

The schoolboy's weapon - but the Romans used giant mechanical ones as siege weaponry. You need

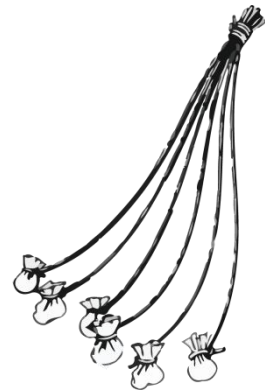
a strong forked twig, preferably with some pliability - a hazel prong is excellent - and a piece of elastic material. A piece of inner tube from a car or bicycle tyre is ideal (and stronger than the elastic in your clothing, although that could be used).



Place a pouch in the center of the elastic (a boot tongue can be used) and thread or **sew** it into position as for the sling, tie the ends to each side of your twig and use a stone as your missile.

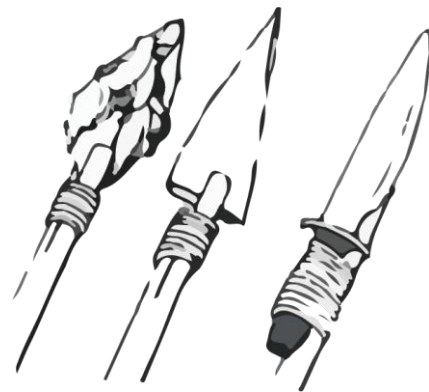
Bela

This is a weapon that Eskimos use against birds. Stones are wrapped in circles of material and 90cm (3 ft) lengths of string knotted around each, the other ends of the string being firmly tied together. Held at the joined end, they are twirled around the head. When released they fly through the air covering a wide area. The Gauchos of South America use the same weapon and variations have been used in combat. The bola wraps around a bird in flight or tangles around an animal's legs or neck, bringing it to the ground and giving the hunter a chance to kill it.



Spears

A staff is a good aid to walking and by sharpening one end can be turned into a useful thrusting or throwing weapon. A straight staff about 1.80m (6ft) is ideal for a jabbing spear. About 90cm (3ft) makes a more manageable throwing spear. A thrower can be made from a piece of wood about half that length - it gives greater accuracy and distance.



To make a spear more effective add a point of flint, knapped to sharpness, or a flattened cone of tin, set into the end - or securely bind on a knife. However, if you only have one knife do not risk it, it could too easily be lost or damaged.

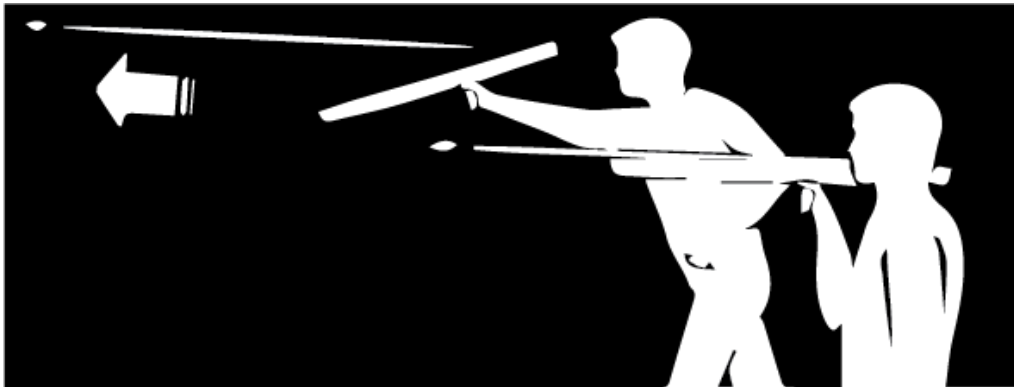
SPEAR THROWER

Spear sits in a groove which runs along most, but not all, of the upper face of the thrower. The end stop adds thrust to the spear.



To make the thrower choose a tree limb that is at least twice the width of your spear and with a

branch stump which can become the forward sloping handle. Split down the center using a knife as a wedge. Gouge out a smooth channel for the spear. Make sure it is cleanly cut, leaving a solid portion as a buffer. Try to match the spear with the length of the thrower and to suit your own balance.



Hold at shoulder level; aim the spear at the target, bringing the holder sharply forwards and then downwards. As you move downwards the butt of the groove adds to the thrust behind the spear.

HUNTING BIRDS

Running noose

A noose attached to a long pole is an effective way of pulling roosting birds down from lower branches. Make a note of roosting and nest sites — remember that droppings will help guide you to them - and if they are within reach return stealthily on nights when there is sufficient light to see them. Slip the noose over the bird and pull, tightening the noose and pulling the bird down at the same time.



Stalking waterfowl

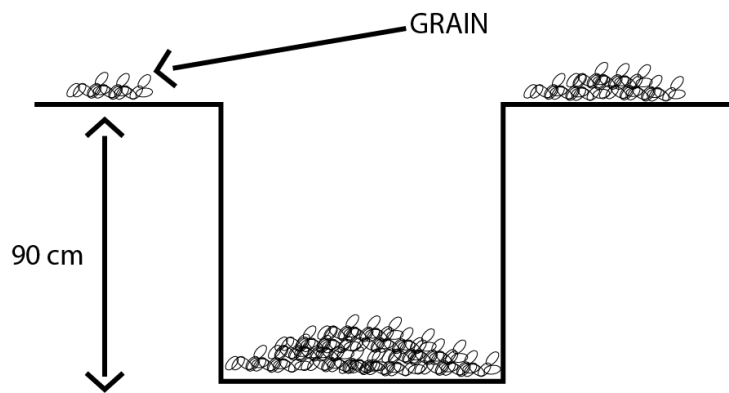
You can get up close by getting in the water and camouflaging yourself around the head with reeds and other vegetation. Very cautiously, approach an area where fowl nest or are regularly seen. But remember that birds (especially large ones such as geese and swans) can be quite ferocious in defense of themselves.

Another technique in some parts of the world is to use a large gourd worn on the head as cover. Holes are made on one side to breathe and see through and with the gourd just sufficiently above the water the hunter floats with the current among the birds. To prepare the birds several other gourds are thrown into the water first. Having got among the wildfowl the hunter grabs the unsuspecting birds from below and strangles them underwater.

Pit trap

Find or dig a hole about 90cm (3ft) deep in an area where ground-feeding birds are common. Its width depends upon the kind of birds you are after. Spread grain or other bait around the hole, and more concentrated inside it.

First taking the bait around the hole, birds will enter it to get more. Rush them. In their panic they are unable to spread their wings sufficiently to take off from inside the hole.



SEAGULLS

Seagulls can be caught by wrapping food around a stone and throwing it in the air. The gull swallows the bait while still on the wing, gulping down the stone with it, and the change in weight causes the bird to crash. Obviously this is a technique for use over land rather than at sea. Be ready to dispatch the bird as soon as it hits the ground.



ANIMAL DANGERS

Few animals are likely to attack the survivor unless in self-defense, most will be much more concerned to get out of the way. There is little chance of encountering large animals such as elephants, rhinos and hippopotamus, or the larger big cats, outside wildlife reserves. Nevertheless avoid making camp on a trail, or close to an animal watering place, where you could find you are in the path of a herd of elephants or confronted by a curious cougar.

WARNING

DON'T PROVOKE AN ENCOUNTER. Bears frequently scavenge from homesteads in the northern forests, turning over garbage cans, and are just as likely to come round your camp for easy pickings. Use noise to drive them off - don't try to catch them. Don't get close to them. A bear can easily kill a man and a wounded bear is particularly dangerous. All injured or cornered animals are likely to be dangerous. Most animals will try to escape. If you prevent them from doing so, you are forcing them to fight.

Crocodiles and alligators should be given a wide berth unless very small - and then beware that there is not a larger crocodile behind you! Any of the large-horned animals is likely to be able to wound you with its horns before you can reach it with a weapon. Stags are particularly belligerent in the rutting season. It is not just hooved animals that can deliver a powerful blow with their feet — ostriches can kill with a kick.



Wolves are much more often heard than seen. Tales of large marauding packs are probably wild exaggerations. A wolf may get curious and look at you from a distance, but you can take with a pinch of salt the idea of hunters being chased by packs of ferocious wolves. If you are badly injured and unable to defend yourself, wolves might finish you off. Hyenas also hunt in packs. Although basically cowardly, they are very powerful and, as scavengers, are attracted to camp sites. They will probably turn tail and run, but drive them off rather than try to tackle them.



The larger apes can easily kill a man — but they are rarely aggressive animals and will usually give you plenty of warning to back off. Small monkeys are much more often encountered and more immediately dangerous — they have sharp teeth. Mature chimpanzees, in particular, can be very bad-tempered. Thoroughly cleanse any animal bite. All could cause tetanus and some mammals, including vampire bats, carry rabies.



Snakes will not be a threat, unless you accidentally come into contact with them. You just have to get used to them and to checking clothing, bedding and equipment for any reptile or insect visitors. Occasionally a snake or a centipede may slide into bed with you, attracted by your warmth. Cases have been known of people waking to find an unwelcome visitor nestling in an armpit or even more intimate places. Try to remember that they are not attacking. Move gently and calmly to free yourself from them.

