

SKILLS

BASICS 3: the sharp end

By Steve Long



The first traditional lead. A major step in any climber's progression. Away from the safety net of a toprope, you're suddenly dependant on your own skill and judgement. If you slip, run out of steam, or fingers uncurl then a fall is inevitable. A scary thought perhaps, but welcome to climbing...

This is your graduation test.

So why trad?

By accident or design some climbers end up leading from the word go, but most take time to reach this stage. This article looks at the strange craft of traditional (trad) leading, i.e. leading on natural protection such as nuts and cams as opposed to bolts. Years ago all first leads were trad, since there was just no other choice, but these days many climbers experience the delights of the lead indoors or on sport routes first. With the wealth of sport routes abroad and some developed areas in the UK you could have a long climbing career without ever placing a nut, but living on an island often called "the home of adventure climbing", this will start to limit your options. Plus if you have any aspirations to head to the Alps or get stuck into some American cracks then you'll definitely need to know your RPs from your Camalots.

First steps

Successful trad lead climbing is obviously closely linked to acquiring the skills of placing natural protection. It's one thing to have every camming device and nut on the market dangling off your harness, and another to know exactly how to place them properly. Experiment removing, testing, and placing gear at ground level or on a top rope, to get feel for what works and what doesn't. Different protection performs differently in varying rock types and it's often surprising what will work - or fail.

Before embarking on your first leads, you

should have gained plenty of experience at the other end of the rope, and have recruited a competent belayer that you trust. Don't be too ambitious with your first leads; choose well-protected climbs that are comfortably within your technical abilities as you learn the craft. Look through the guidebook for clues to identify the right climb. If the route is relatively technical for the grade (e.g. Severe 4b) then you can usually expect good protection. On the other hand, if the climb looks like a blank featureless wall from below, leading to a bold roof, then it's probably not a very sensible proposition at this stage, or perhaps ever!

Whatever grade you have managed prior to trad leading, be realistic on your first excursions. A good idea is to stick to classic climbs (look for quality star ratings or adjectives like "excellent" or "enjoyable") within the Diff to VDiff grade range. On these you'll generally be able to stand comfortably whilst placing runners, and not get too distracted by the technicalities of the moves.

The normal goal of trad climbing is the onsight lead. That is, leading the route from bottom to top with no prior knowledge. But you can always bend the ethics and take the sting out of your first few routes. One way is to second or top-rope a route first to familiarise yourself with the moves and also perhaps try out the protection placements. You could even pre-place and test runner placements from an abseil or top-rope and then clip them on the lead. There's not much point in getting somebody else to place them though since that misses the point.



(LEFT) Mailee Rafe on PMC1 (HS 4a) at Curbar. A rare lower grade crack in an area of scary blank tespieces.

(TOP) Unknown climber enjoying the classic Valkyrie (HVS 4c,5a) at Froggatt - an unusual two pitch gritstone route.

(ABOVE) Chris Lockyer pulls rope coiling duty at the end of a trad climbing day. All credit: Alex Messenger.

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Strapiombante, Froggatt. A well protected and popular first E1. Credit: Nick Smith.

Another tactic is to top-rope a climb, placing runners as you go. A more experienced friend could then give you feedback about the reliability and positioning of your runners. Taking this a step further, a suitably experienced and helpful friend could protect themselves using an ascending device such as a jumar or shunt, and climb alongside or above you, giving you feedback as you lead a pitch. Just don't expect them to stop you falling off!

If you are keen to learn but none of your friends are experienced enough to try these tactics, you might find a willing teacher at your local club. Check out your local climbing wall for adverts, or see the directory on the BMC website. The most reliable way to learn is to recruit a qualified instructor. The minimum qualification for teaching leading

Gear Placements

As a general rule, the larger the anchor, the stronger it is, assuming that the rock is sound. Look out for cracks or friable patches that suggest suspect rock. Larger nuts and cams have more surface area to grip with, and therefore more in reserve if the edges of a crack crumble slightly. Thinner wires are obviously weaker than thick wires, and micro wires have a very low breaking strain as seen in Summit 33. Karabiners also have a low breaking strain when gate open, cross, or nose-loaded, as the *Vital Link* feature in this issue explores.

Get in the habit of grading runner placements so that you can make an objective appraisal of how likely the runner would be to hold if you were to fall; say five points for a bomb-proof anchor and one point for a suspect runner. You should be aiming for at least three points for every runner on your first climbs; taking calculated risks with marginal gear is definitely only for experienced leaders on a "pushy" lead.



James Pearson protecting The Zone (E9 6c), Curbar with a skyhook. What would this score on the "bomber runner scale"? Credit: Alex Messenger.

is the Mountaineering Instructor Award (MIA), so look for people holding MIA, MIC or British Mountain Guide qualifications. Alternatively book yourself on a course such as those run by Plas y Brenin, the National Mountain Centre.

Equipment

For trad climbing, you'll need gear, and lots of it. Starting from the head, helmets are even more important than usual. Some climbs may pass through bands of suspect rock, and on any trad crag there is usually a significant risk of stonefall from parties above. Next is a harness, and your choice of harness might be influenced by the need to carry considerably more kit up a climb, so look for plenty of gear loops, extending as far towards the front of the harness as possible. If you've got a rope from sports or indoor climbing, this should be fine for easier trad climbs, but for climbs of more than half a rope length abseil retreat becomes an issue and on wandering lines friction from rope drag will make your life a misery.

So sooner or later you'll need to learn to use double ropes. Two full ropes would be extra safe but heavy; so it's normal to use half ropes, usually between 8 and 9mm in diameter as a reasonable compromise. The good news is that you'll only need one since it's normal practice for any climbing partner to bring their own as well.

For trad, belay devices such as Sticht Plates, Reversos, Bugs, ATCs etc are much more suited to handling dynamic loadings with gradual deceleration, than a grabbing device like the Gri Gri which will shock load the runners. There are also some very lightweight devices available such as Bugettes and Reversinos. These are designed to be with thin double or twin ropes, 8.5mm and less, and can make holding a fall easier,

especially if the climber is heavier than the belayer. But these devices will dissipate heat less effectively, often getting very hot when abseiling. The wide choice of belay devices is there for a reason, so think about the ropes you'll be using and your weight relative to your partner's - don't just buy the device that your mate bought!

Shops will be keen to sell you a hefty rack of gear, and sure enough, it will all come in useful one day. However, for your early leads, chunky items of gear such as hexes and medium to large wires provide reassuring strength and are relatively easy to appraise visually once placed. By all means get a few cams too, but pay particular attention to placing them. They have a tendency to swivel out of position when jogged around by rope drag, and many novices place them so poorly they would rip straight out if fallen on.

Unlike indoors, a few longer slings are needed too, for extending off-route runners, and threading spikes, chockstones and trees.

Develop a system for racking equipment that works for you and keep to it. This will allow you to quickly locate gear when you need it with minimum angst. Generally wires should be placed close to hand on your stronger side, with larger items further back. I keep my wires in three bundles according to size; small, medium and large. Quickdraws can be stored even further back, or perhaps on a bandolier.

Strategies

Leading a route requires a strategic approach; the climber needs to make best use of their strength and equipment to reach the top before either runs out, and coping strategies are needed for the occasions when they are in short supply!

Before leaping on a climb, take a good look at it beforehand, something that's often forgotten in the excitement. If it just follows a hairline crack in an otherwise featureless slab then you can leave your hexes and large cams behind. Trust me, it's a geological impossibility that they'll fit. Try and match the amount of gear with what you'll need too, 14 quickdraws may be fine for Pembroke, but do you really need them on a 10 metre Birchen's classic? Check for the guidebook for beta too, there may be crucial or trick placements you can't anticipate from the ground. By inspecting the route you'll also be able to read some of the moves and spot potential recovery spots, thus saving maximum energy.

Plan where you will be trying to get that crucial first runner in, and remember that on a single pitch route, anything that you can place from the ground will quickly become redundant. It's always a good idea to arrange a cluster of runners before a hard sequence so that you have a failsafe in case one fails or gets knocked out. Eliminating this kind of worry helps you focus on the climbing instead of fussing about the gear.

Remember that your belayer should be positioned close to the bottom of the climb, not metres away having a chat with someone. This increases the chances of protection “unzipping” from the bottom up, then losing control as they are pulled toward the crag, and you falling further. Don’t be afraid to remind them of these facts either.

Belays

Constructing sound belays needs to be second nature for the lead climber, especially on multi-pitch climbs. For single-pitch climbs, the principles are identical to setting up a top-rope, except that since you are already tied to the rope, this is often used to tie into the anchor points.

A simple way to equalise the anchors is to clip the rope into an anchor then tie it off to your harness. This can then be repeated for other anchors, using an additional karabiner once the first gets congested. Start by tying into anchors that are furthest away.

There are also several ways to equalise anchors using a long (120cm sling). One simple way is to clip the sling into both anchors and form a loop by tying an overhand knot in the doubled tape. This knot can be manoeuvred into a position where the load is shared equally by each anchor, and the climber clips into the loop for the belay.

Having led a pitch and constructed a belay, you’ll need to think about your stance. Usually you will be belaying from the top using an indirect system. This means that the rope from the second climber runs to the belay device on your harness. It follows that an inattentive belayer can easily be caught by surprise if their partner suddenly falls. Position yourself in line between the anchor and climber so that you cannot be pulled sideways, and pre-load the anchors to prevent them being shock loaded. Be careful about where the ropes run, if they pass over your left thigh, then you should be using your left hand to lock off the rope, even if normally you’d use your right.

Falling off

The ultimate goal of a successful lead is to reach the top without falling off. Whilst it is fairly normal to see sport climbers practising a move by grabbing runners and taking falls prior to a clean redpoint ascent, this approach is much more dangerous on traditional climbs and a clean on-sight ascent is not only ideal but advisable. Firstly, you should consider what you might hit if you fall off. Anything less than vertical is going to involve a collision once you are airborne. Pulling on a natural runner may well rip it too as the loading will be outwards rather than simply downwards.

If you are unable to complete a move, try reversing back to a resting spot. This allows a war of attrition, gradually piecing together a sequence until you are ready to go for it. But sometimes it’s not going to happen. The safest way to escape is to down climb until

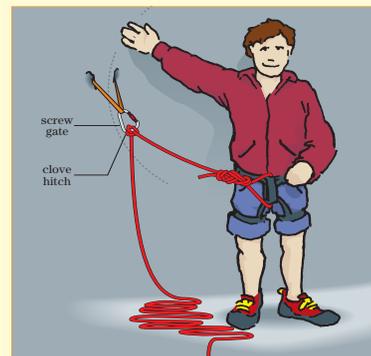


Sarah Adcock on Bel Ami, (VS 4c), Curbar. Credit: Alex Messenger

Attaching to anchors

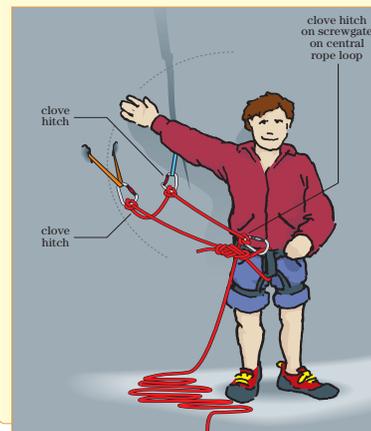
Single anchor within reach

Tie a clove hitch to a screwgate karabiner at the anchor.



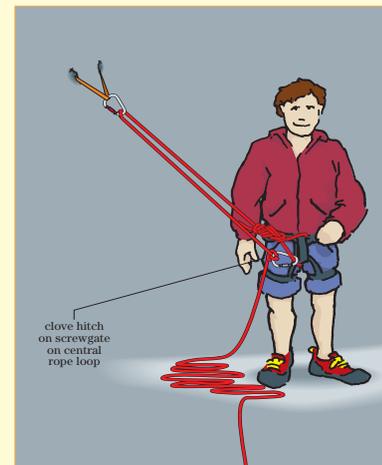
Two anchors within reach

Clove hitch to the first anchor, leave some slack then clove hitch to the second anchor, bring the rope back to a clove hitch on a screwgate karabiner on the central rope loop. Adjust any of the clove hitches to ensure equal tension.



Single anchor out of reach

Any adjustment is best done at the belayer to avoid moving back and forth to the anchor to get the correct tension. Clip the rope through a screwgate karabiner at the anchor before moving close to the desired position, tie a loose clove hitch to a screwgate karabiner attached to the central rope loop, tighten the screwgate, then move to final position and adjust tension. This way the belayer is attached before moving to a precarious position at the cliff top.



3 anchor essentials

- Anchors equally loaded
- Anchors independently tied off
- Angles between anchors 60° and less

Diagram taken from the new MLTUK book, **Rock Climbing**.

below a couple of reasonable runners, before getting lowered to the ground, retrieving the gear by abseil. Trying to save time by stripping gear as you reverse climb is a very good way to get injured, as many climbers can testify. Equipment is replaceable, but your health isn’t.

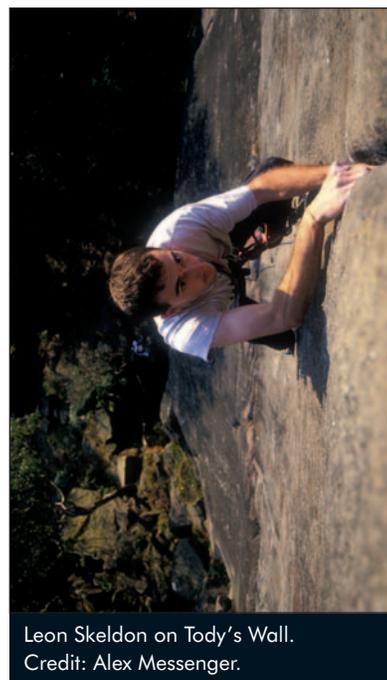
Multi-pitch climbs

Leading multi-pitch climbs is a more committing proposition, and before embarking on the route you should consider how you will get off, whether or not you complete the route. It’s a good idea to carry some spare cord and a karabiner that you are willing to abandon to ease retreat if necessary. You may well be able to “swing” leads with your

partner. This gives a great team spirit to the climb, and allows you to choose pitches that suit individual skills - your mate will probably be happier than you on that poorly protected overhanging offwidth pitch!

At the end of each pitch a belay must be constructed, strong enough to hold the potentially greater forces involved if the leader should fall off on the following pitch. If runners fail, the leader could fall beyond the belay, resulting in a very high shock loading. Alternatively, a heavy leader can pull a light belayer upwards or sideways, so the anchors need to be chosen with this in mind. A couple of low spikes may be fine for bringing somebody up a pitch but might be lifted off when holding a heavy leader. If the runner subsequently were to fail, the team would be left with no belay! In this situation, high anchors are preferable and multi-directional anchors such as threads are ideal.

Long multi-pitch climbs are best treated like an expedition, and you should aim to be independent in the event of unexpected changes in the weather or incidents. It's a good idea for at least one of you (probably the person seconding each pitch) to carry a small rucksack containing some drink and snacks. It's a good idea to carry a penknife as well. On mountain routes, light water-proofs are a sensible precaution, and a small head torch with fresh batteries. You may well want to carry walking shoes to save your feet on the descent. Don't overload the poor second, though, weight is crucial and a heavy rucksack will make the climbing feel far more difficult. Choose a light sack with a simple attachment point so that it can be clipped into the anchor while belaying.



Leon Skeldon on Tody's Wall.
Credit: Alex Messenger.

Some have gear loops for carrying kit, and you might prefer an incorporated hydration system, but personally I prefer the simplicity of a recycled water-bottle.

Psychology

Don't rush into leading traditional climbs before you fully understand and accept the risks: many people find sufficient excitement simply from following climbs. Before leading climbs you will also need to have developed the ability to find opportunities to rest and recover. Hanging on long enough to place a natural runner takes a lot more effort than clipping a bolt.

A positive frame of mind is essential for leading climbs, so regular practice is essential, particularly if you want to progress to harder routes. If you don't get enough time to climb trad regularly, bouldering and walls can help you keep in trim.

Desire is essential for leading climbs. Don't try a climb unless you really want to get up it. On the other hand try not to get despondent if you fail- it happens to the best climbers, you just don't hear about it! Failure is useful - it teaches a good climber how to get better by working on weaknesses - it just doesn't feel like it at the time! ||

Steve Long works for Plas y Brenin, the National Mountain Centre. PyB run a variety of learning to lead courses. See www.pyb.co.uk

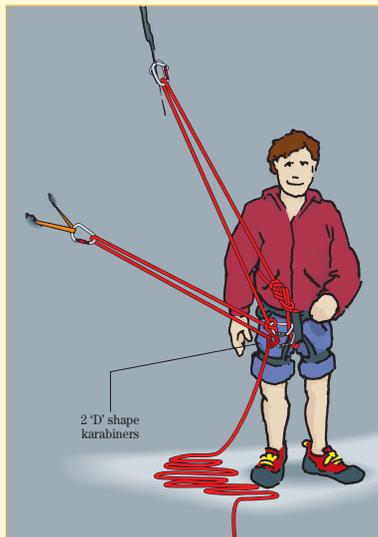
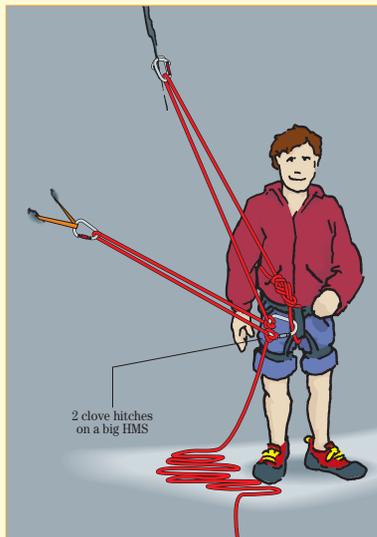
Next issue: Winter Climbing for rock climbers. Then in issue 36, we'll be covering self rescue, assisted hoists, prussiking, and all the other emergency skills people are often reluctant to learn.

Attaching to anchors *continued*

Two anchors out of reach

Clip both anchors and move towards desired position holding the middle bit of rope between the anchors and the slack rope. Clove hitch the middle bit of rope from the first anchor, get into position and adjust tension before adding a

clove hitch from the second anchor. A large HMS karabiner may be sufficient to seat two clove hitches but if there is any concern of creating a load too wide for the karabiner two separate screwgate karabiners should be used instead.



(LEFT) Diagram taken from the new MLTUK book, **Rock Climbing**. (FAR LEFT) Multi pitch action on Agags Groove, Glencoe. Credit: BMC