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THE DESCENT

INTRODUCTION

The descent, or getting down, is sometimes the most difficult part of a climb. This is especially true of multi-pitch climbs, which may involve dangerous multiple rappels in the dark. It is best to know beforehand how to get down, especially on a long day. Rappelling and walking off are the two methods for descending. Rappelling is often the quickest way down, and puts you back at the base of the climb where you stashed your approach gear. Rappelling technique has been covered extensively in the "Rappel Technique" chapter and rappel anchors have been covered in the "Anchor Systems" chapter, so this chapter just covers considerations for its use in lead and multi-pitch situations. Walking off is not always as easy as it seems.

SETTING UP THE RAPPEL

Setting up a series of rappels from a multi-pitch ascent requires **advance planning**. You need to anticipate what gear you have to carry. If you are familiar with the anchors, you can try to plan it exactly. Black Quacker at Mt. Lemmon ends with a single rappel off the summit and a walk-down to the base. The Wasteland at Cochise Stronghold requires several rappels mixed with walking around. If you are unsure, you should take at least two ropes, at least one rappel ring for every pitch, and at least two "runaways" or "bail slings" (5' slings tied with a water knot) for every pitch. This way you can leave gear at every rap station if necessary. Also, consider what may happen if you don't finish the climb for some reason. For example, if you are forced to abandon Black Quacker, and rap the route, you should carry enough rappel rings or runaways to leave behind a safe anchor. The runaways can be used for anchor materials, so you really don't have to carry much extra weight. One environmental consideration is that you should try to plan ahead enough to carry runaways that are the same color as the rock, so that they are not an eyesore for other area users. This simple step can save headaches when it comes time to talk about continued recreational usage.

You should almost always take two ropes on a multi-pitch climb. Most multi-pitch climbs require a full rope-length rappel requiring two ropes threaded through the anchor and tied together. Also, if your only rope is damaged, you may be completely stuck if you have no extra.

The most common ways to carry two ropes are to lead on two ropes, to lead on one and trail an extra, or to carry an extra rope in the second's pack. For example, you could lead on two 9 mm ropes, clipping both into each piece (the total weight is about the same as one 11 mm); this method treats the two ropes as a single unit. The belay technique is the same as with one rope, but the belayer should practice before the multi-pitch climb. You could lead on one rope and trail the other, but you need to be careful of snagging the second rope, since it is not constrained to the path of the lead rope. Or, you could lead on a regular 10.5 mm or 11 mm and carry a 7 mm, 8 mm or 9 mm in a pack just for the double-rope rappel. This presents certain safety considerations, as listed below under "RAPPELLING WITH TWO DIFFERENT DIAMETER ROPES."

Many rappel stations will still be rigged from the last use. Never assume that the previous rappellers knew how to set a safe anchor. You must decide whether or not to use the existing materials or to remove and replace them, and whether or not to re-rig the anchor. Check each sling for structural integrity along its entire length. If the sling feels stiff or brittle, replace it. It has been damaged by too much exposure to the sun and weather. Check white slings very carefully; it may be a bleached out colored sling. Try looking inside the knot to see if there is still some color. Bleaching is a sign the sling has been out in the sun too long, but if the sling is still supple, it is probably still safe.

Check the knots to be sure they are properly tied and dressed. If you are not absolutely certain that the slings are okay, remove at least one and replace it with a new one from your own supply. If the sling is being tied directly through bolt hangers, use the tails of the water knot for padding.

Use a rappel ring for the anchor if you have to set one. If you run out of rappel rings, thread the rope directly through the runaway. Since you have not already used this runaway for rappelling, and you can verify its safety (i.e., the knot is properly tied and there is no damage to the sling), it is safe to use it. Remember, you are going to pull the rope through this sling after the rappel, which is more difficult because of the increased friction; after that, the sling is suspect and should be considered dangerous. The friction of the rope rubbing against the sling will weaken and perhaps saw through it. It is better to leave two slings in this situation, to ensure redundancy, as we teach in anchors school; however, if you do multi-pitch climbs long enough, you will encounter a situation in which you are forced to rap off a single sling. You simply need to be extra careful to double-check the knot and structural integrity of the entire length of the sling—more than once. Most of the rappel fatalities listed in *Accidents in North American Mountaineering* are actually anchor errors which involve single sling anchors.

Another option if you run out of rappel rings is to use "leaver biners." Leave two biners, reversed and opposed, as the rappel anchor. It is dangerous to use a single biner, but if you have to, tape the gate shut with climbing tape if you have some.

There are several knots that are used for a double rope rappel, and different people swear by their own favorite. It is safe to use a grapevine or a figure-8-on-a-follow-through to tie the ropes together, as well as some other configurations. The grapevine works best for ropes of a different diameter. The figure-8-on-a-follow-through is similar to the climber's tie-in knot. You are tying two tails together instead of doubling back the single tail on the climber's knot. Start by tying a figure-8 in the end of one rope but don't feed the tail back through to "follow-through." Instead, feed the end of the second rope as the "follow-through."

Remember which rope to pull so the knot doesn't get caught in the rappel anchor. For example, if you have a black rope and a white rope, thread the end of the white rope through the rappel ring (or sling, chains or biners) and then tie the two ends together with one of the above knots. Remember to "pull black" to get both ropes down.

RAPPELLING

It is important that the first rappeller **check to see if the rope can be pulled easily** enough to get it down after the last rappel, as having to prusik back up can increase your chances of coming down in the dark. Once this is verified, all but the last person can descend.

It is important that the last person down **prevents rope twists**. Most modern rappel devices (slot type) automatically prevent twists, but if you use a figure-8 descending ring, clip a biner to the pulling rope above your rappel device and pull the biner down as you rappel.

It is also important that the last rappeller **ensures that the knot will not get caught on an edge**. There is a lot of friction in a rope being pulled from a rappel, both from the rappel ring (and even more from a runaway) and from the rock the rope is rubbing across. If the knot also needs to rub across the rock, and especially if it needs to be pulled over an edge, the extra friction generated can lock off the rope, requiring a prusik journey. You must pull the knot away from the rappel ring and over the edge, so that it doesn't get stuck. This can be tricky if there are no footholds to help unweight the rope while the adjustment is made. Normally, you grab the knot with your guide hand and work it down away from the rappel ring toward the edge of the rappel, setting it just over the side. If it is obvious that it will be a problem, set up a trash rappel configuration at the beginning so you can work with both hands from a locked off rappel.

One of the authors set a rappel around a Joshua Tree boulder about six feet in diameter. The knot wasn't a problem. The friction in the rope completely locked off the rope, requiring a prusik trip back up the rope and the setting of an alternate rappel station. Pulling the rappel from the top of the Wasteland at Cochise was made possible only by extending the rappel anchor another foot from the original setup—and the knot was not an issue. The rappel from the top of Jacuzzi Spires requires that the knot be moved over the edge from the rappel anchor, or the rope can't be pulled.

Every time you rappel from a multi-pitch climb, **tie a stopper knot** on each end of the rope. Before you pull the rope down, untie the stopper knots.

Multi-pitch climbs have a habit of providing the worst in weather. If there is wind, set up a trash rappel configuration to allow for using both hands to free the rope while on rappel. Again, it will allow a quicker, more efficient, and safer descent.

For multiple rappels, save time by feeding the rope through the next anchor while pulling it down from the previous anchor.

SIMUL-RAPPELLING

Occasionally you will ascend a pinnacle with no walk-off and no anchor on top. The first ascent party recognized that they could "tandem rappel" or "simul-rappel" to get down. This can be done in either of two ways.

The most common way is for two climbers to rappel down simultaneously on opposite sides of the pinnacle. The rope needs a "saddle" or groove in which to settle so that it doesn't roll off to one side or the other. The second variation is to have one climber act as an anchor on top while the other one rappels off and anchors his/her rope to the ground so the "anchoring" climber can rappel off the other side. This may provide more stability during the individual rappels, instead of having the inherent instability of two simultaneous rappellers. To do this, the heavier climber should be the anchor.

RAPPELLING WITH TWO DIFFERENT DIAMETER ROPES

There are pros and cons to the decision about which two ropes to take. The first consideration is weight. Rope weights are approximately as follows:

11 mm	8.5 pounds
10.5 mm	7.7 pounds
9 mm	5.6 pounds
8 mm	4.6 pounds
7 mm	4.1 pounds

The more common rope combination weights are as follows:

10.5 mm + 10.5 mm	15.4 pounds
10.5 mm + 8 mm	13.3 pounds
10.5 mm + 7 mm	11.8 pounds
9 mm + 9 mm	10.2 pounds

There are safety factors to consider when using two different diameter ropes in a double-rope rappel. It will feed through your rappel device faster than the larger diameter rope, leaving the bottom ends unequal in length. This may result in rapping off the end of the double rope rappel as the small-diameter rope releases from the rappel device and the other rope doesn't. Also, when you tie a stopper knot to prevent rapping off the end, tie both ends together, since the knot in the smaller rope can go through some belay devices (figure-8). Since the double-rope combination is moving through the anchor, another bad thing can happen if you have set the anchor using a runaway—the moving rope can burn through the sling, failing the anchor.

One way to try to prevent this movement is to tie the grapevine or figure-8 knot connecting the two ropes at the anchor so that the small rope is the one you pull from the bottom. This should keep it from feeding too fast. However, this may present problems. The knot itself may jam in the rappel ring and prevent the ropes from being pulled after everyone is down. The small rope is harder to pull (harder to get a grip on). And, since you are pulling the small rope, if the lead rope gets stuck, you may only have the small rope with which to continue your descent.

These problems are magnified the smaller the diameter of the rope. A 7mm rope is the minimum that most people will use, but it is also the hardest to grip with your hands to pull down and the hardest to throw down in the wind because of its light weight. Many people use the slightly heavier 8mm for this reason.

To make it easier to deal with small ropes, set the anchor with rappel rings or "leaver biners" instead of runaways to reduce drag. If there is wind, set up a rappel with a safety lockoff and carry the rope down, feeding it as you go. Keep a tight brake hand when rappelling and be careful whenever you unweight the rope (such as on intermediate ledges) to limit slippage. "Fix" the ropes until the last rappeller goes down by tying a knot just under the rappel anchor or having the last rappeller put pressure on the two ropes. When the last rappeller moves the knot down over the edge away from the anchor, it may prevent the knot from moving back up over the edge toward the anchor for the same reason it is hard to pull the knot over the edge in the first place. It is still possible for the rope to move upwards, though.

It may help to buy a longer second rope to compensate for the slippage, or to buy a static rope instead of dynamic, which doesn't slip as easily.

WALKOFFS

While walking off may seem safer than rappelling, it carries its own set of safety factors to consider. Some of the walkoffs from multi-pitch climbs are down loose, scree-filled gullies. The act of walking down them often erodes the gully more. If you are trying to walk off after dark, you have some potential route-finding problems, as well as additional dangers from sudden drop-offs, unseen loose rock, and downclimbs that during the day would be easy but at night become iffy. There often are places where you will need to combine rappels with some walking off.

SPORT CLIP

The sport clip is a specialized technique you can use to be lowered from or to rappel from the two-bolt anchor at the top of a sport climb after you finish the lead. As you descend, clean the pro. Then you can use the anchor as a

slingshot system for other climbers, or pull the rope and let your belayer lead the climb.

- Girth-hitch two personal anchors to your belay loop. Add a locking biner on the end of each one, and clip the biners to your gear loops, one on each side. Keep them out of the way of the quickdraws you are carrying on your harness to avoid confusion during the lead.
- Lead the climb.
- When you reach the anchors, clip the right-side locker into the right-hand bolt hanger and the left-side locker into the left. Lock the two biners and you are now safely anchored.
- Pull up about 10’ of rope and thread a bight through the anchors.
- If the anchors are cold shuts or hangers with a rope-bearing surface, thread the bight directly through both hangers.
- If the bolt hangers do not have a rope-bearing surface, add one quickdraw to each bolt hanger and clip through the bottom biners like a regular slingshot setup (always add the quickdraws so that the bottom biners are reversed and opposed).
- If you are planning on leaving the resulting slingshot anchor set up for other people to climb, add the quickdraws even if the anchors are cold shuts. Using the anchors for slingshot climbs wears the bolt hangers or cold shuts down a lot faster; it is easier to replace biners than to replace the anchors when they are worn out. The last person up can clean the anchor gear by using a variation of this technique to remove the quickdraws and pass the rope directly through the anchors.
- Tie off the threaded bight securely to a harness locker with a butterfly or figure-8 on a bight. This is mandatory—if you drop the rope, you can be stuck on the wall for awhile, depending on the difficulty of the climb and the availability of someone to re-lead it or the feasibility of walking around and dropping a new rope from above.
- Verify that the rope is tied off to your harness and untie your climber’s tie-in knot. Pass the end through the anchors so that the rope is now threaded through both anchors and back to you, as in a slingshot system.
- Re-tie the climber’s knot. Double-check it (have your partner check from the ground if he/she can see it well enough). Load-test it with your personal anchors in place. Unweight and unclip your personal anchors and have your partner lower you as if you had just finished a slingshot climb. Clean the quickdraws as you go. This may require some help from the belayer, and some tricky maneuvering on your part if the route is overhung.

An alternate version. Some people feel it is safer to use the method just described because you stay tied into the rope. Others, comfortable with the redundant, locked, personal anchors, prefer to pull up 10’–15’ or rope, clove hitch it to a harness locker, untie the climber’s knot, thread the end through the anchors as above, re-tie the climber’s knot and untie the clove hitch.

The rappel variation. Many anchors are set so that the rope runs over sharp edges or abrasive rock. To save wear and tear and avoid cutting the rope, it may be safer to rappel rather than be lowered. Use the above procedures to thread the rope through the anchor, but drop the end to the ground instead of re-tying in a climber’s knot on your harness. Set up the rappel. Follow the standard rappel safety double-checks—make sure both ends of the rope reach the ground, double-check your rappel setup (have your partner check from the ground if he/she can see it well enough), load-test it, then unweight and unclip your personal anchors and rappel down.