

Ultra-lightweight trowel

I am a thief... there I've said it! I must confess right from the start that I have shamelessly stolen this brilliantly simple idea from a first timer that I had the pleasure of walking with on this year's TGO Challenge. Phil Turner is a young 24 year old lightweight walker who is pushing towards travelling ultralight and what really impressed me about this chap was that he was obviously a highly intelligent and responsible individual. This is exactly the type of person that I consider makes a successful and safe ultra-lightweight walker. As we discussed kit Phil announced proudly that he had a piece of kit that was lighter than mine. Surely not I thought, what could it be? The shelter? No, he was using a Hex. Stove? Could he be using a stove lighter than 17g? No not that. My carbon poles? No. Intrigued I asked what it was and from his



backpack he smugly produced a trowel built from a large aluminium tent peg that had a simple cork handle attached by duck tape. It may have looked somewhat "homemade" but after a quick fondle I was stunned by not only how light and comfortable it was but as to why I hadn't already thought of this. As I considered it more I could see that this was the perfect piece of ultra-lightweight kit because it was dual use. Why not also use it as a peg when camping and save a further 10g?

My standard plastic trowel is quite light at 55g and it does the job but I've never been thrilled with it. That wide blade struggles to penetrate the tough heather root-infested ground that most of Scotland is covered in, and when it does it flexes alarmingly. Though it hasn't yet snapped stress marks can clearly be seen all over the blade. Secondly, of course, it is normally just dead weight carried in the pack. I could see that a thinner aluminium peg-based trowel would penetrate the ground much easier, be stronger, have little flex and could also earn its keep as a peg in camp.

Annoyed that I hadn't thought of this simple but brilliant tool my competitive side kicked in, and I continued to ponder over the design for the remaining Challenge, determined that my trowel would be lighter and look better than



that of Phil's. On return to normality my first task was to track down a suitable peg. It needed to have a blade depth of around 6" as per my original orange trowel but still have enough space for a comfortable handle. Obviously the peg should be very light and immensely strong. After a little effort I discovered that MSR produce a suitable peg called the Blizzard tent stake that had been designed for winter snow camping, but with a length of nearly 10" and a weight of only 25g it looked ideal. The handle took a little more thought. I didn't have any cork and I wasn't convinced that it was the lightest or most comfortable option. I did try using it without any handle, and while by far the lightest option I found that this was very uncomfortable when hacking through tough ground. In the end I decided on a simple light foam handle made from a closed cell camping mat wrapped in grosgrain ribbon tape for grip and durability. A trowel this small and light could be easily lost, so a piece of orange dyneema cord with a simple plastic mitten hook (total 1g) allows it to be secured safely to the pack when walking. Finished weight for the trowel is 31g, which is a useful saving over the original, but as it also replaces one of my big heavy main guy pegs (10g) its effective weight is down to a minuscule 22g. In use the trowel has no disadvantages when compared to that original plastic trowel. The blade easily penetrates the tough ground and I find that I can dig holes at least twice as fast, and with the padded handle comfort is assured.



Go on make your own!

I had a couple of comments on the Challenge that my projects were a little complicated and that many needed a sewing machine which not everybody has. If that sounds like you then do have a go at this as it is by far the simplest project I have done and once you get the bits together it should take no more than 20 mins to construct.

What you will need

MSR Blizzard tent stake - available from ultralightoutdoodgear.co.uk.

Closed cell foam mat - 20*10 cm should be more than enough.

1m Grosgrain ribbon (1/2") – this is a fine lightweight but strong fabric ribbon that is used for the handle covering (optional as you could just use tape).

20 cm dyneema cord – for the security lanyard (optional).

1 plastic mitten clip – for the security lanyard (optional).

Double sided tape – to secure the fabric tape to the foam (not needed if you don't use the fabric tape option).



Assembly

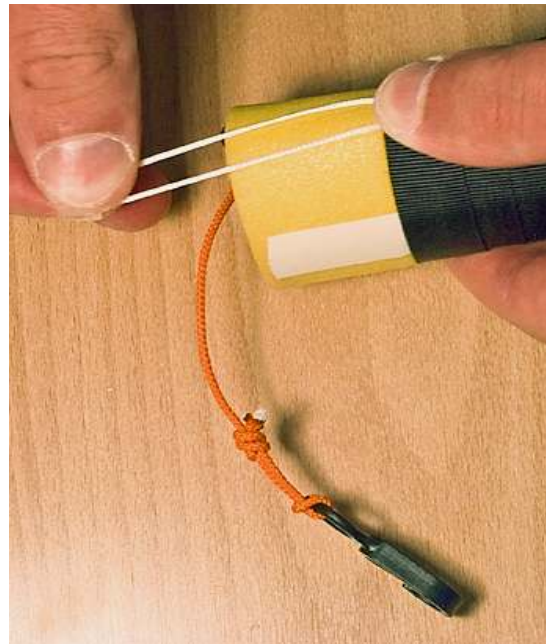
- 1 Take a piece of foam and mark either side of the peg.
- 2 To determine the length for your handle use the width of your fingers as a guide. Again mark the foam, and when happy cut out this small piece of foam.



- 3 Then cut a second piece of foam to the same length as determined in step 2 but the width should be enough so that it tightly wraps around the whole peg.
- 4 Attach the cord and plastic mitten clip through the pre-drilled hole in the peg.



- 5 Insert the small piece of foam into the hollow of the peg. It will be a tight fit.
- 6 Wrap the second larger piece of foam around the peg body and secure with double-sided tape. Add a second piece of double-sided tape on the other side of the handle directly opposite the first. This tape is used to grip the grosgrain ribbon and stop it slipping in use.
- 7 Remove the double-sided tape backing paper and using the grosgrain ribbon tape start at the bottom and very tightly wrap it spirally around the handle until you get 2/3 of the way up. Form a loop in some spare dyneema and continue wrapping the handle covering all but the top of this loop, which will be used as a pull-through cord. Sounds complicated, but look at the photos on this and the next page and all should become clear.





8 When completed, slip the end of the grosgrain ribbon tape through the loop in the dyneema and pull the ends of the dyneema hard, which will pull the end of the grosgrain ribbon tape under the handle and therefore secure it. Pull the end of the grosgrain ribbon tape all the way through and cut off any extra. A blob of adhesive can be forced in between the grosgrain ribbon and foam at either end of the handle to further secure the handle covering if needed.

9 That's it you've finished your trowel. I told you it was easy!



Finally I must thank Phil Turner for sowing the seed for the project. Whether mine's any better or even lighter than Phil's I don't know, but I've thoroughly enjoyed giving it my best shot and it's always a bonus when your new homemade lightweight gear is better than the heavier commercial gear it replaces. Phil -- on the next Challenge I will be checking your gear very, very closely!



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