



# CONTROLLED LOWERING OF A CAMBIUM SAVER

A Visual Guide

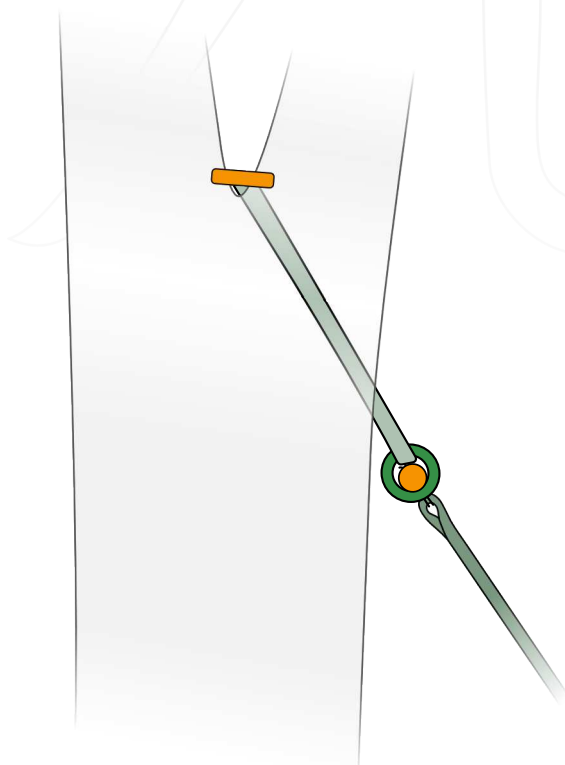
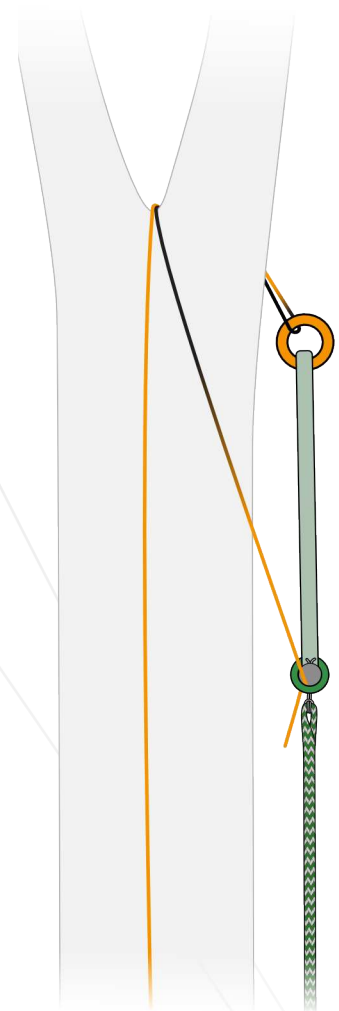
**C**ambium Savers (Friction Savers) are a staple in modern arboricultural climbing systems and while the most common method to retrieve them is via an uncontrolled drop from the canopy this can have some negative consequences both in the short and long term.

Short term:

- Potential damage to people and property
- Cambium saver getting stuck or wrapped

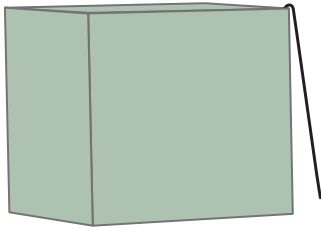
Long Term:

- Damage to cambium saver through striking hard surfaces i.e. nicks and burrs in metal work.



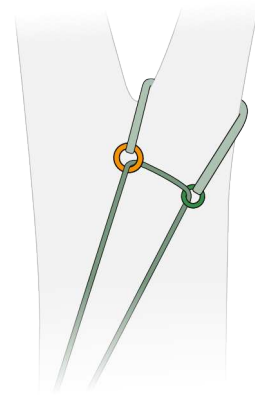
Lowering the cambium saver to the ground in a controlled manner mitigates these risks and is not difficult nor overly time consuming. In addition it can potentially save the climber from needing to reascend the tree to remove the stuck hardware from a crotch or branch.

## Equipment Required:



i.i: Throw line and cube

i.ii: retrieval ball

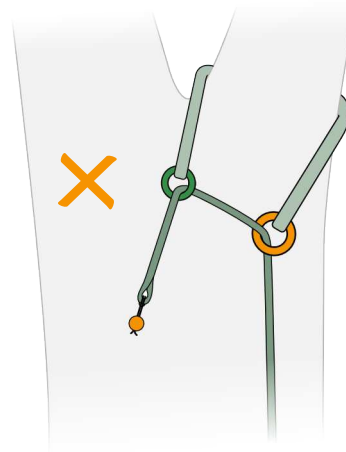
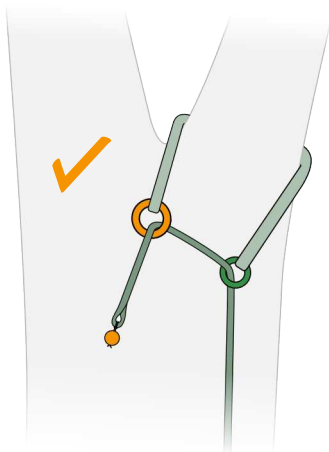


This method requires no more extra equipment than would be used to install the cambium saver from the ground along with the retrieval ball specific to the cambium saver. For the ease of illustration a ring to ring saver is shown in this document but this method should work with an adjustable cambium savers as well.



If the climber does not have a retrieval ball of the correct size then a solution may be improvised. If a ring to ring style is being used then a small accessory carabiner *may* be of the right size to pass through the large ring but not the small. An overhand knot may also fit through the large ring but this will be dictated by the rope diameter.

Prior to descending make sure that the cambium saver is threaded correctly.



## Lowered Retrieval

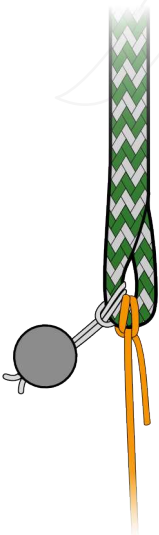
**Step 1:** Once the climber has descended and free of the system they should make sure that the side of the line that is through the large ring side is free of any knots that could prevent it from passing through this ring. For a DdRT (MRS) system this shouldn't require any action, if climbing SRT (SRS) and using a knot block canopy anchor you will need to ensure the knot (often an alpine butterfly) has been removed.



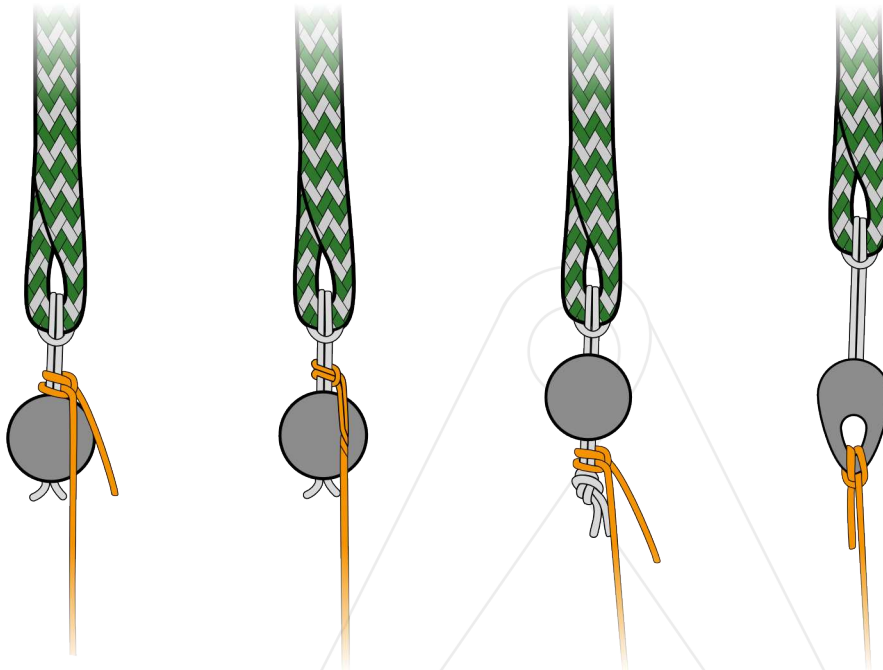
**Step 2:** Setup the retrieval grouping. This involves 3 parts:

- The rope
- The retrieval ball
- The throw-line.

Depending on the rope in question there are a variety of methods.



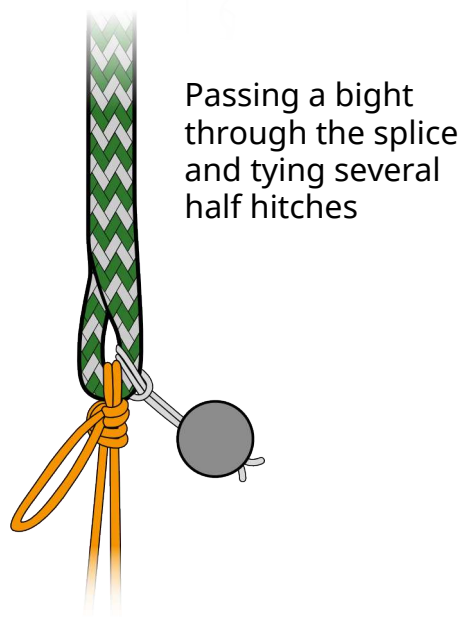
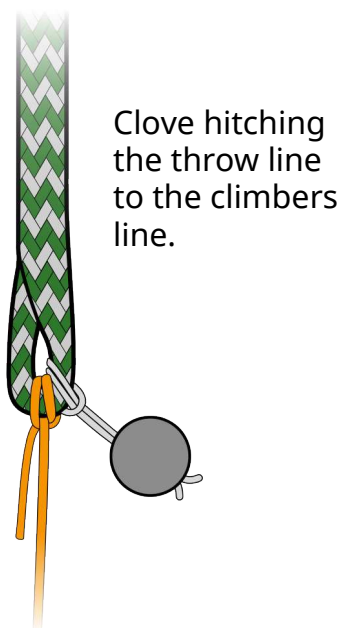
**Spliced Line:** If a splice is present in the line invariably the first step will be to girth hitch the retrieval ball to the splice. The throw line can then be attached in a variety of ways, examples include.



Clove or girth hitching the throw line to the retrieval ball, this can be done either above or below the ball itself and some balls will be designed with this in mind.

Attaching *below* the ball keeps everything in line and this can be helpful on a cambium saver with a smaller than average large ring as there is more consistency in travel if the ball needs to be pulled back through the large ring.

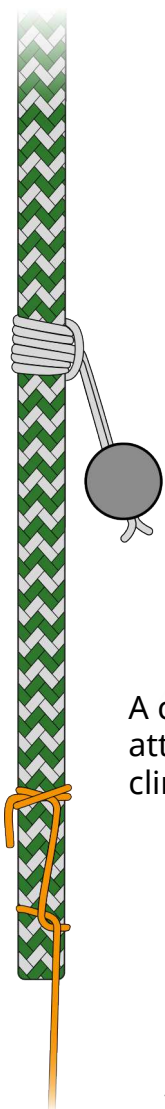
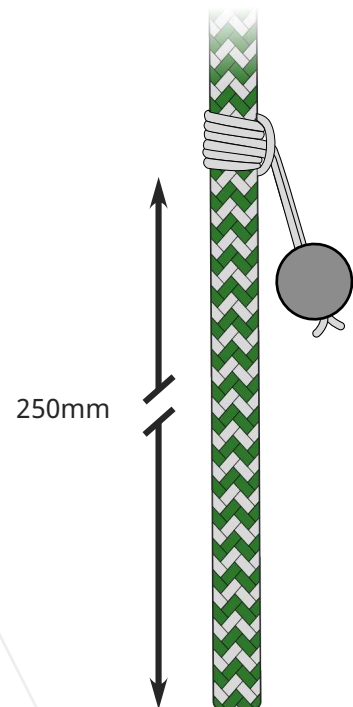
Other options include:



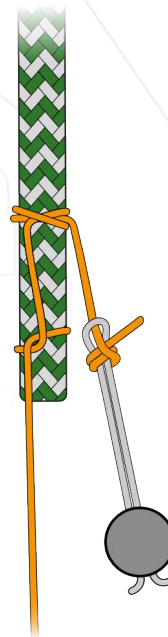
**No Spliced Eye:** If no spliced eye is present there are also ways to attach the retrieval ball and throw line.

The retrieval ball may be friction hitched to the climbing line. The hitch should be set at least 250 mm from the end, set very tightly and dressed correctly. This ensures that there is sufficient room for the hitch to bed in as it is loaded.

To form the hitch the cord on the retrieval ball may need to be replaced and lengthened.

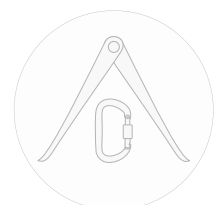


A clove hitch and half hitch to attach the throw line to the climbing line.

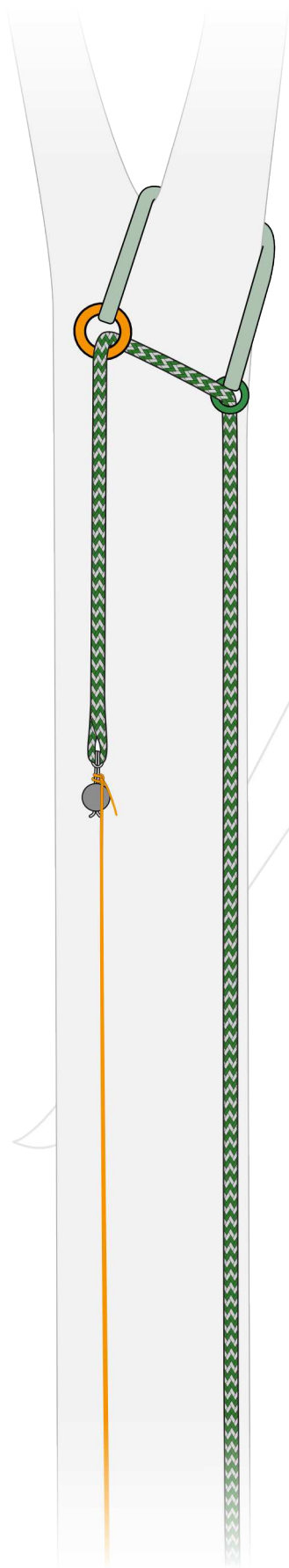


The retrieval ball may be tied to the end tail of the clove hitch with a sheet bend (an additional turn can add security).

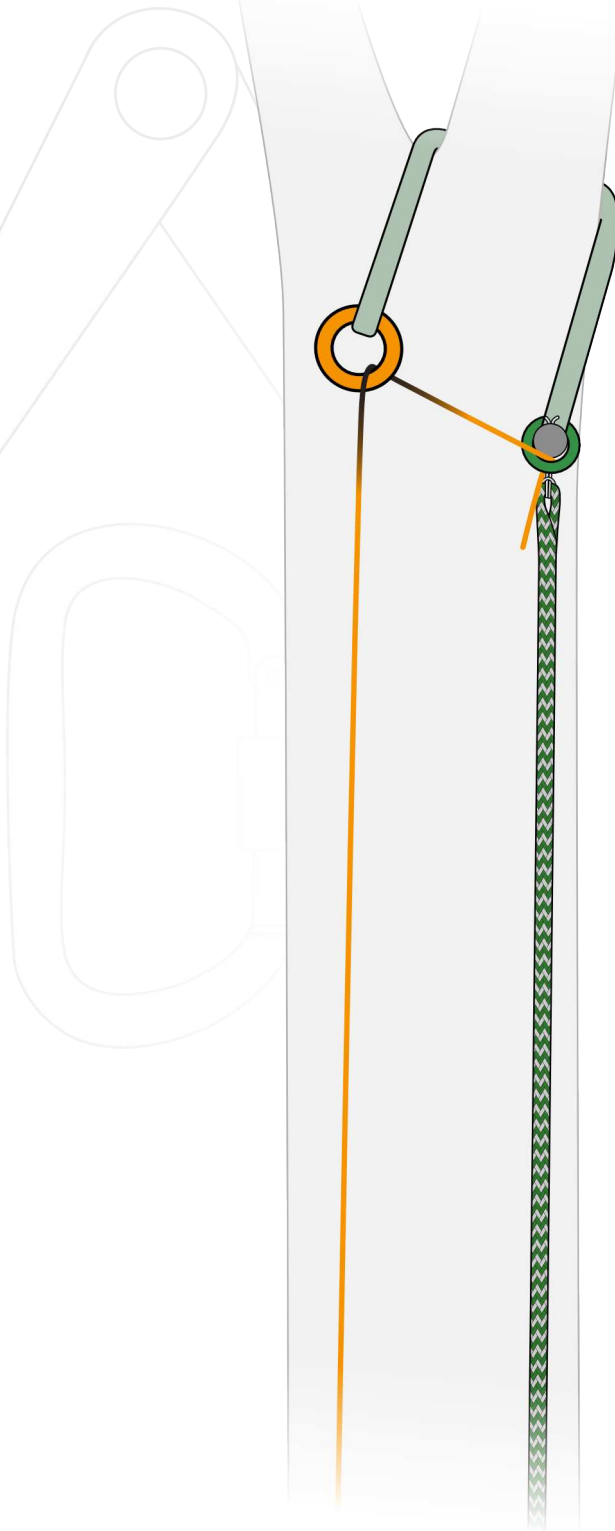
Regardless of the means of attachment it is important to ensure that the retrieval grouping of the climbers line or splice, retrieval ball and throw line is of small enough size that it will pass through the large ring of the cambium saver but not so small that it also passes through the small ring.



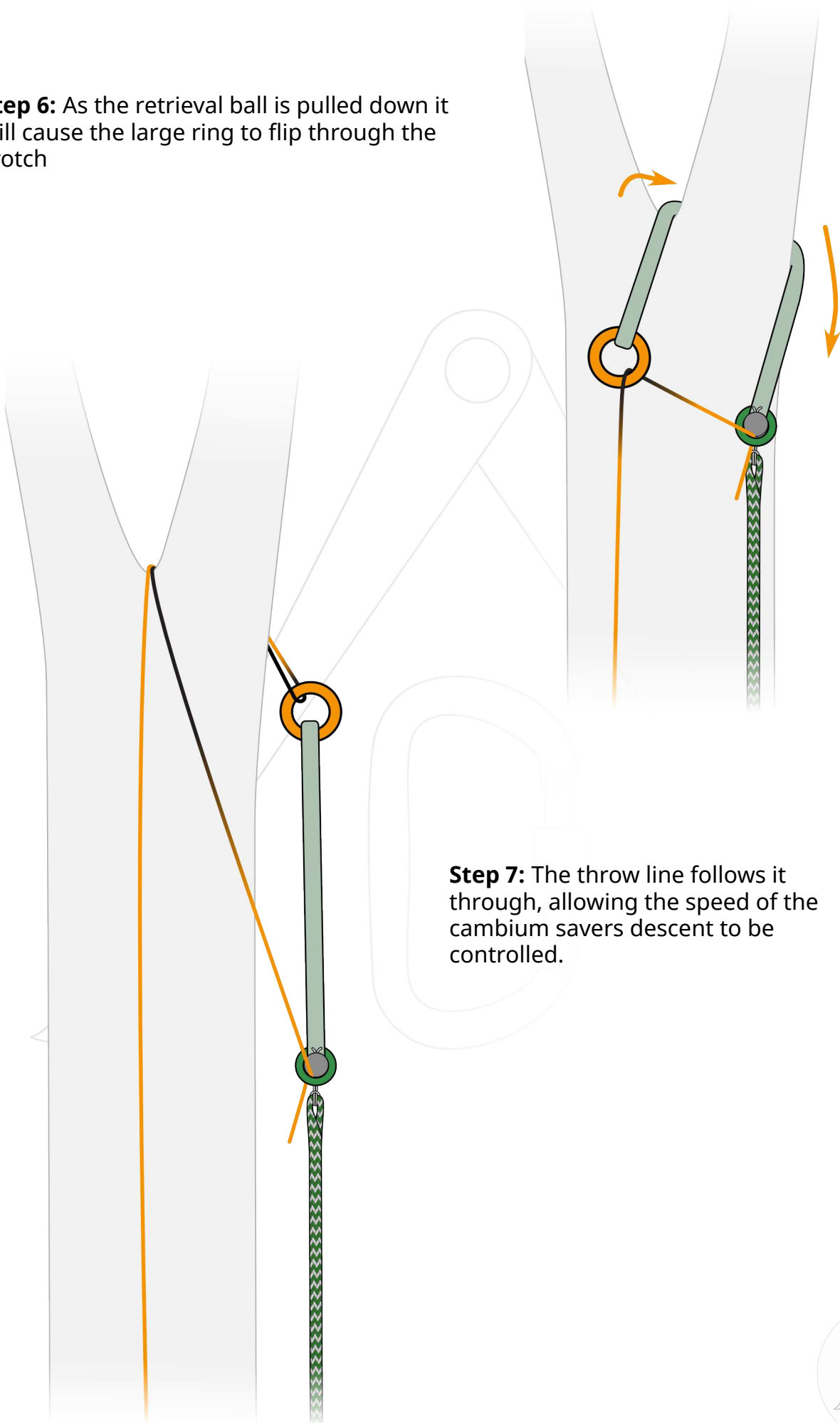
**Step 4:** The climber can now begin to pull the climber's line through the cambium saver.



**Step 5:** Once the retrieval ball has passed through the large ring it should catch in the small ring.

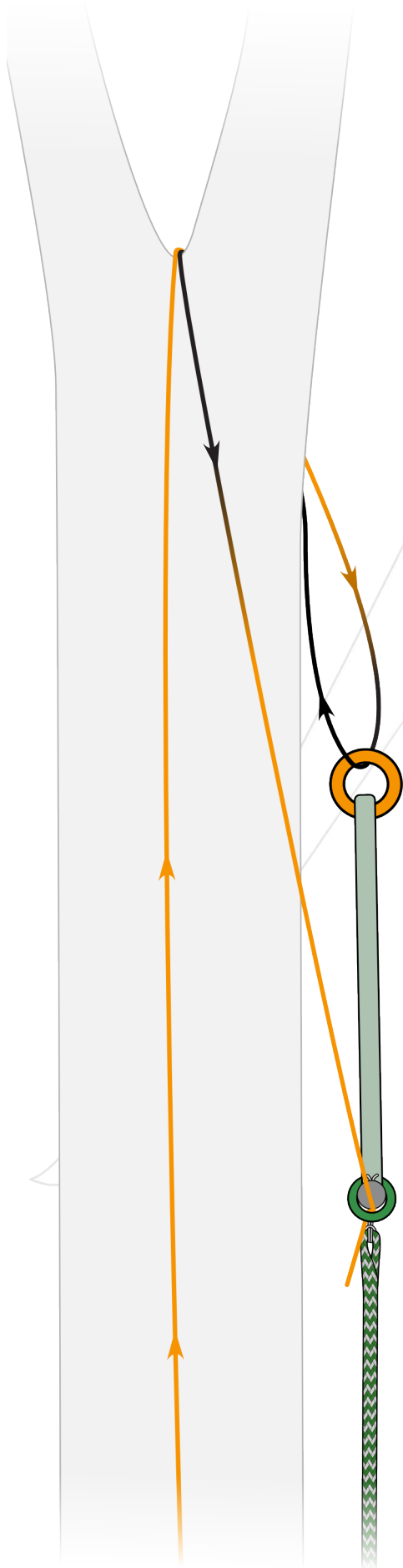


**Step 6:** As the retrieval ball is pulled down it will cause the large ring to flip through the crotch



**Step 7:** The throw line follows it through, allowing the speed of the cambium savers descent to be controlled.

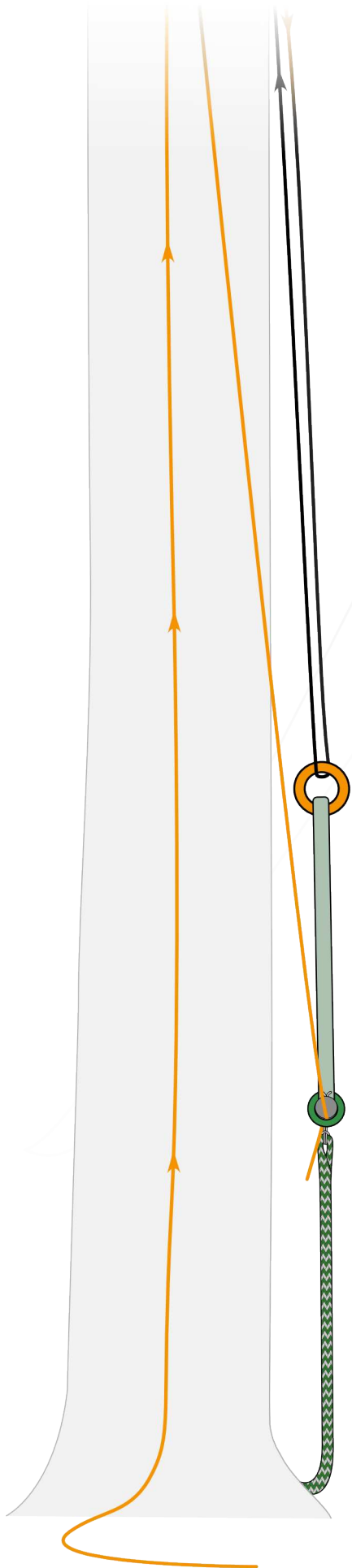




**Step 8:** The cambium saver can now be lowered out of the tree. Speed can be controlled via a hand on the throw line.

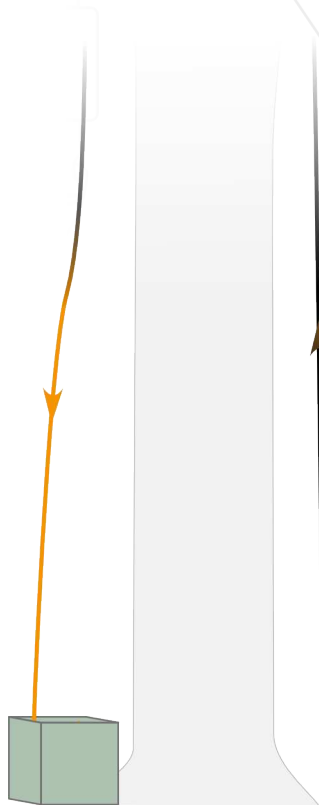






**Step 9:** Once on the ground the throw line may be untied and the throw line pulled through. Depending on where the majority of the line is, it may be easier to pull it through from the cambium saver side.

This can be a good opportunity to use the TiP as a high point so that the throw line may be fed back into the throw cube cleanly ready for the next climb.



Lowering a cambium saver to the ground can be an effective way to extend the life of the cambium saver and therefore the climber's ropes. By dropping it onto the ground from height the cambium saver is at risk of becoming damaged from the impact. Even soft ground can hide rocks or other hard objects which can dent and burr the metal work. These can subsequently damage the climber's rope or cause wear to be accelerated. This is particularly a concern with soft aluminium style rings and it is good practice to regularly inspect such metal work for damage (like all equipment used for PPE)

Another advantage is that if the cambium saver does get stuck on the descent then with a controlled lower the climber can attempt to pull it back up and may be able to free the cambium saver.

Ultimately each climber is going to have techniques and working practices they gravitate towards and use often. This is by no means an essential technique and may not be deemed necessary on every tree but it may provide more security on retrievals and on balance over a month may save time by reducing the chances of a stuck cambium saver and providing regular opportunities to ensure the throw-line is neatly flaked into the storage bag,

If you have found this information useful please share it with someone you think would also benefit and if you would like to support the creation of further documents like this please consider donating via the Climbing Technical website.

[www.climbingtechnical.com](http://www.climbingtechnical.com)

Also on this website you will find a guide similar to this one on the installation of a Cambium Saver from the ground free to download.

