

# Working on Spikes

By Mark Bridge

Working on spikes—or gaffs—is an integral part of tree work. Putting on the spikes in the morning to ascend a tree prior to felling it is a familiar action for many arborists the world over. And yet, from a formal and training point of view, our relationship with this ubiquitous positioning aid remains inexplicably vague. What exactly constitutes best practice? How do we instruct trainee arborists to use this tool safely, effectively, and in an ergonomic fashion? The following article seeks to elaborate a few of these points, based on observations from many years of working on spikes, as well as from a training point of view.

One unhelpful aspect, when discussing work on spikes, is that there are a number of myths surrounding them—often based on a lack of discussion and a somewhat macho attitude.

“Anybody can spike up a stem,” is one of these myths. And while this statement may contain a grain of truth, experience shows this can be true to a greater or lesser degree. Not every tree is as easy to ascend with spikes, depending on its growth pattern, inclination, wood structure, diameter, as well as the temperature and humidity, to name a few factors. So if the introduction of a trainee arborist to spikes is limited to “Here are the spikes, strap them on and get up the tree,” then this is obviously quite limited and probably inadequate.

The other myth is that gaffing out is a given, just something that happens, while working on spikes. (i.e., being knocked off the spikes in a rigging situation, in which a top is snatched onto a rigging block, the ensuing movement of the stem causing the spikes to be knocked out of the wood)



Spikes—or gaffs—are an integral part of tree work, and they come in all shapes and lengths.

Is it really as simple as that? Gaffing out—is it a big deal, a major hazard an arborist has to deal with, or is it a minor risk that one just has to take into account?

If indeed the premise that gaffing out is as much a part of working on spikes as tripping is part of walking, then the response to that would have to be: while walking, one attempts not to trip, as depending upon when and where a trip occurs, the consequences can be either negligible or very significant.

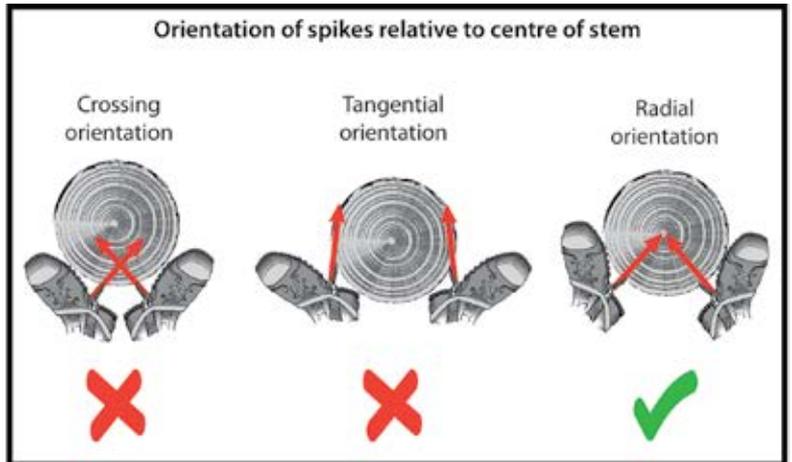
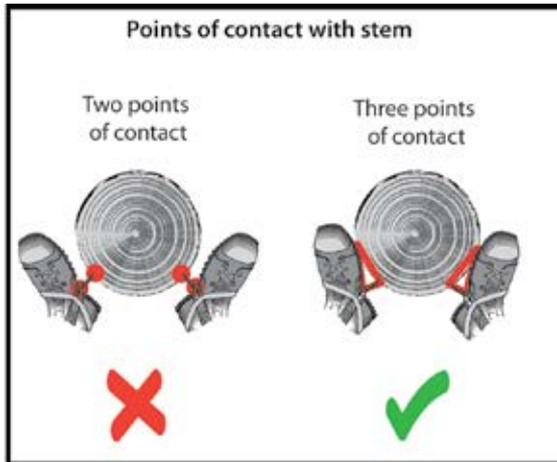
Probably the same can be said of gaffing out: it is ultimately down to the situation in which it occurs, whether it is more or less serious.

Gaffing out while using a chain saw is obviously extremely hazardous. Doing so on low diameter, smooth-bark stems with little or no taper can lead to potentially dangerous situations, and can be exacerbated by an unfortunately positioned stump in the way of a fall. Wet or freezing conditions can further change the picture radically.

In view of these reflections, complacency seems an inappropriate fashion in which to mitigate the risks mentioned here. Equally so is the suggestion that all one needs to address this situation is to harden up.

Solutions to addressing the risks associated with working on spikes are really quite easy and plentiful:

- **Trainees need a proper introduction to working on spikes.** One should explain points such as: how to adjust the length of the shaft correctly, how tightly they need to be worn, how to avoid injury and damage to the line due to inadvertent contact with the spikes, and maintenance of the spikes (i.e., how to sharpen them correctly). Also, time should be taken to explain tie-in options while ascending the stem, lanyard placement, and the possibilities of second tie-in points. For one who is ascending on spikes for the first time, it may be appropriate to consider having the trainee of a belay to exclude the risk of a sliding fall—the need for this depends on the person and their aptitude.
- **Spikes/gaffs come in all sorts of shapes and lengths.** Use the right ones for the type of wood being worked on. Hard wood is easier to position on with short spikes, whereas thick-barked species are easier to work on with longer ones. Doing the opposite, one struggles either to get a good purchase through the bark or to place the spikes well into the stem.



Illustrating the proper points of contact and orientation of climbing spikes while in use.

- **Double wrap the lanyard on low diameter stems to prevent sliding down.** *This is not a trivial matter.* In truth, it is an uncontrolled fall, despite the fact that the lanyard is installed around the stem while it is happening. The climber has no control over his or her fall.
- **Use a link between the two parts of the lanyard either side of the stem.** For example, a low diameter (min. 6 mm diameter) Prusik loop with a carabiner on it. This link can be pushed up against the stem, which prevents a sliding fall. In France, for instance, this is a legal obligation defined in legislation.
- **Encourage a better understanding of the tool employed.** It is not unusual to see people ramming their spikes into the stem repeatedly before making a cut just to make sure it is really well in. This seems indicative of a person who does not trust their tools. If the spikes are sharp and well placed, there is a low risk of them popping out—thereby removing the need to repeatedly ram them in forcefully.
- **Place the spikes in a radial orientation towards the middle of the stem rather than tangentially, across the stem.** Do not balance on the spikes (two points of contact); rather, rotate the foot inward, so that the front of the foot makes contact with the stem, this position creates three contact points, increases the contact area, and is inherently more stable.

It seems surprising that for a tool that is so ubiquitous in the arborist trade there are so few formalized guidelines on how to use spikes. One would have to assume this is because the general assumption is that the tool is self-explanatory. Obviously, this is not so, and one would have to say, based upon experience when training people to use spikes or when observing climbers moving around on them, that this view falls short of the truth, which is somewhat more complex.

One point remains undisputed: if used correctly, gaffs or spikes are a valuable, versatile work positioning tool.

However, gaffing out is not an inevitability that simply has to be accepted. Rather, this is a further example of a risk that needs to be managed, and there are a range of measures to do so. With these mitigating actions in place, the question of whether gaffing out is a drama or a triviality becomes a managed risk, and consequently a moot point.

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