

“CANOPY TREKKING”: A GROUND-INDEPENDENT, ROPE-BASED METHOD FOR HORIZONTAL MOVEMENT THROUGH FOREST CANOPIES

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Who among us, having climbed into the canopy, has not wanted to move ‘just over there’ maybe a few meters, maybe into another tree, or maybe even across the entire forest canopy? The canopy raft (Hall 1990), “web” (Perry and Williams 1981), cranes (Shaw, this volume), booms (Ashton 1995), walkways (see Chapter 23), and zip-lines (Chapter 25) are all realizations of this wish for horizontal freedom within forest canopies. Unfortunately, all of these techniques are expensive with regard to both time and money, are sometimes cumbersome and elaborate, and are potentially harmful to the canopy we wish to study. What many of us really want is the individual freedom to go where we want and to leave little trace of our passage.

The first hint of rope-based horizontal movement came with exposure to arborist techniques for moving within crowns and between trees (Dial and Tobin 1994; Jepson 2000).



“CANOPY TREKKING”-cont’d

Because these techniques use a moving rope rather than single rope technique (reviewed by Moffett and Lowman 1995; Lowman and Wittman 1996), climbers can move through the canopy pulling their ropes along with them, moving for hours or even days in any direction they can situate their ropes.

The principal objective in rope-based horizontal movement through a canopy is to place a climbing rope from one limb across the top of a second limb and to retrieve the rope from under the second limb and back to the climber at the first limb. Then the rope can be anchored, allowing the climber to move horizontally from the first to the second limb. The process of actually moving between limbs is straightforward, and several techniques can be used (Dial and Tobin 1994; Smith and Padgett 1996). What is more problematic is how to (1) get the climbing line over the second limb and (2) retrieve it from under the second limb.

Sillett and his students at Humboldt State University working with inventor Tom Ness came up with a fist-sized mini-grapnel attached to fly-fishing line for retrieving throw bags tossed over distant limbs. This technique described by Ellyson and Sillett (2003) is suitable for distances less than 10 m. For distances greater than 10 m, we employ something called the “magic missile” (see Figure 1). The magic missile is a fiberglass arrow tipped with recurved tines and a backward pointing barb fired from a 150-pound pull crossbow. The missile is tied to fishing line fed from a crossbow-mounted spinning reel. This setup can be used to retrieve a throw bag line up to 40 m away. We have applied the technique for greater than 500 m horizontal movement through tall canopies in California conifers and hardwood forests in Borneo and Australia (Weintraub 2003).

While orangutans, gibbons, and spider monkeys still mock our technique, it does bring canopy access and movement closer to the ideal of total freedom of movement that is low in weight, cost, and impact to the forest environment.

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