



By Larry Hill

The water was clear and cold. The visibility was almost 4 feet / 1.2 meters, exceptional for this cave system. We had secured our main cave line with 24-inch / 61-centimeter-long stakes in the bottom, since there were no natural tie-offs. On previous trips we had pushed all but the last 4 inches / 10 centimeters of the stakes into the soft silt. We did this very slowly to avoid stirring things up, then added the jump reel to the main line.

**U**nder normal conditions, this would take only seconds, but this cave is different. With the water temperature in the low 30s F / near 0 C, heavy 1/4-inch / 7-millimeter gloves made everything slower and harder. Fingers that once moved nimbly now were cold and sluggish. Just opening the jump reel loop was difficult. While passing the reel through the loop and pulling the light tight, I wondered if I would have to leave it on the way back. Removing the jump reel after another hour in these cold conditions may prove to be workable.

*There must be a better way*, I thought while attempting to slide a line arrow off the surgical tubing used for storing them on a dive vest. Stowing the arrow on the return would surely be impossible with numb fingers. While hovering in the 40-inch / 102-centimeter high passage, I attached the arrow to the main line, pointing to the exit. Just touching the main line disturbed the silt just inches below it. In-

stalling the jump reel and line arrow was taking far longer than expected. The forward progress of the dive had stalled. Following a line with heavy gloves in a silt-out was not high on the list of things to do.

The side passage we wanted to explore only went about 150 feet / 45 meters. Disappointed, cold and tired, we picked up our reels and, as expected, the line arrow dropped deep into the silt while I was trying to replace it on the tubing. Again, there must be a better way.

**J**ump reels and arrows are two items that are always used together, so why not put them together. To do so, drill two small holes about 3/16- to 1/4-inch / 0.4-to 0.6-centimeters apart into the line arrow, then pass the jump reel line through them. Leave a conventional reel loop and retie the line with a bowline knot. This provides a quick way of connecting a line arrow to the main line and a reel loop. The line arrow can be attached

## Quick Connection Eases Jump-Line Tie-Off



1 Drill two holes into a standard line arrow.



2 Pass jump-reel line through the holes then secure with a bowline knot.

3 Attach the arrow to the main line so it points toward the exit. The dangling line is attached to the jump reel.



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to the main line in all the conventional ways. Pass the main line through the line arrow slots and / or wrap the base or tip with the main line for a stronger connection. If the arrow is not used, it's still possible to pass the reel through the loop in the line.

Deployment is easy. Store the reel loop over the drag screw in a conventional way, and then wind the line back into the reel until the arrow is stopped against the reel's line guide slot. Tighten the drag to hold it in place.

The jump reel can be attached and detached from the main line in seconds even with thick gloves, yet the attachment is secure. It can be tugged, pulled and kicked repeatedly without coming off the line. And there is no chance of dropping the line arrow even when fumbling with cold-numbered fingers inside thick gloves. ■

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