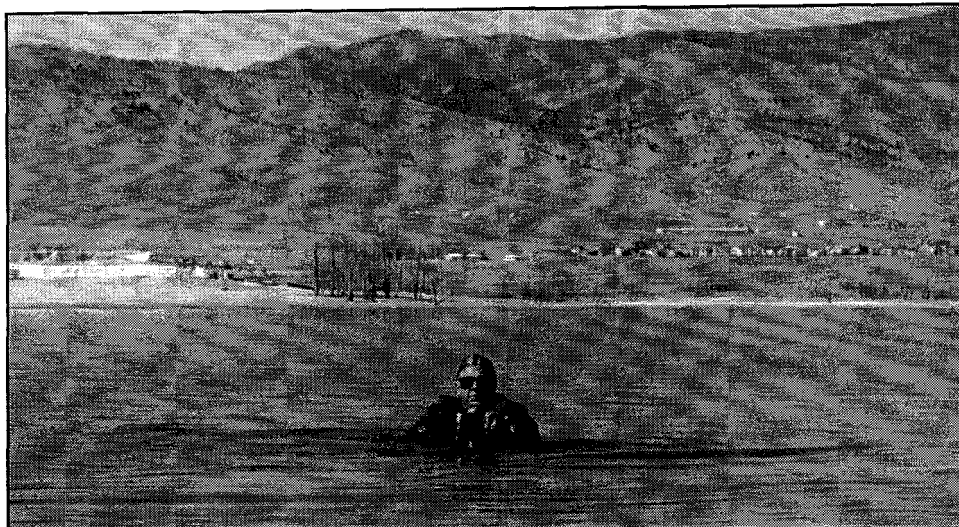


Testing Your Cold Water Clothing System

by Harv Mastalir

Harv Mastalir trying out his cold water clothing system at the Boulder Reservoir



It was the first week in June and we were paddling on Yellowstone Lake. We were the first party to pull a wilderness permit for the lake that year. A few weeks earlier there had still been ice on the lake. Now the water temperature had 'warmed' to 44°, but we still felt under-dressed in our wetsuits. The water was soooo cold when it splashed on our hands!

Late afternoon at our final camp we saw the motorized canoe go by. We joked about the stance they held in the boat...there was no doubt that they were headed home tonight. In less than two hours they should be at the ranger station. As it turned out, we were the last people to see them alive. In two hours they would both be dead.

Was it the wind or a wave or did they just trip over their motor? Whatever the cause, they ended up in the water, and although the coroner's report would list drowning as the cause of death, it was undoubtedly hypothermia that caused the drowning.

According to the U.S. Coast Guard, a person would have 30 to 60 minutes in 40° to 50° water before becoming totally exhausted or going unconscious. Death (from hypothermia) would take one to three hours, but of course drowning would occur shortly after losing consciousness.

Having spent two winters paddling the rugged coast of Maine, mostly solo, I am well aware of the seriousness of capsizing in cold water. Even properly dressed with a drysuit and insulation, a capsized would

have been a survival situation. It was with this background that I decided to test my cold water clothing system in the winter at the Boulder Reservoir.

In the spring and fall I wear a SSI fleece farmer john wetsuit that is supposed to be the equivalent of a 2.5mm neoprene wetsuit. I know this is not as warm as neoprene, but it is vastly more comfortable because of the fleece lining, so I am more inclined to wear it. SSI (an Australian company) has gone out of business, but similar suits are made by Henderson, Voyageur and LL Bean.

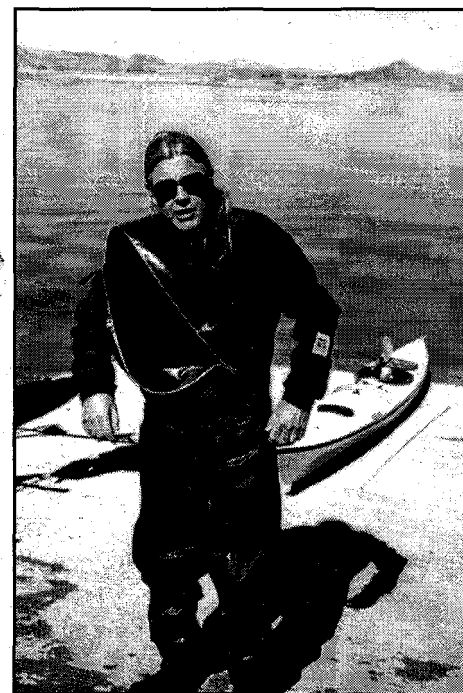
When the water gets really cold, or is accompanied by cold air temperatures, I wear my drysuit with my wetsuit underneath it. To this I add an expedition weight poly-pro turtle neck. It is important to remember that the drysuit doesn't keep you warm, it's what you wear underneath it that insulates you.

On my feet I wear a pair of poly-pro hiking socks underneath a pair of neoprene socks, which I then slip into a pair of Teva sandals. When I step into very cold water I get a momentary rush of cold but then it almost immediately turns warm. I like this system on my feet because it is so versatile; I can adjust it to suit the conditions.

For my head I have a waterproof and windproof hood made out of the same material as my wetsuit. It completely covers my head and neck with an opening for my face only. If I need more insulation than this (which I usually don't) I can wear a stocking cap over the hood. Fifty percent

of your body's heat loss is through your head and neck, so it's important to pay attention to keeping your head warm.

I like pogies for my hands because they allow me to keep my bare hands on the paddle shaft. I also always carry a pair of neoprene gloves and keep them handy, because pogies won't keep your hands



Harv getting very cold after opening up his drysuit to a slight breeze after 45 minutes in the water

warm, if you go for a swim. Reading accounts of kayak accidents in Deep Trouble (which is in the club library), a repeating theme is how fast you lose the use of your hands in cold water. In 50° water, it takes about 10 minutes for your hands to become useless stumps. The neoprene gloves would go on my hands as soon as I could put them on if I were to go for a swim.

This was the system I entered the water with, sans the fleece hood because I wasn't going to completely submerge my head. Naturally, I was also wearing my PFD. The thermometer said the water was 40°. I floated in the water with no intention of conserving my body heat. I floated, staying still for awhile, I treaded water for

awhile and I swam around for awhile. I could feel cold water slowly moving up my legs and eventually up to the small of my back. This was because I wasn't careful enough and got my sock caught underneath the ankle gasket on my drysuit. After 45 minutes in the water I swam over to Susan's kayak and pulled myself up on her deck several times to see if I had lost any strength or coordination to the cold. I hadn't, although I definitely wasn't as warm as when I entered the water.

When I got out of the water I took my temperature again. It had dropped one degree in the forty five minutes in the water. It was when I opened my drysuit to take it off and exposed my wet body to the cold air and wind that I suddenly felt cold.

What this little experiment told me was that my system is basically sound. I can count on it to increase my survival time in extremely cold water. I also experienced first hand the importance of making sure all the gaskets are sealed properly on my drysuit.

If you paddle in cold water (the Coast Guard considers water 70° and less cold!), it is important to test your clothing system to see if it will perform as you expect. Have you tested yours?

Editor's note:

Harv will be writing an article on hypothermia in the next newsletter.