

Jim Landrum (right, back) attacks a Class 3 rapid at Nahtahala Rapid Falls. Photographs courtesy of Advanced Arm Dynamics Inc.

## Jim Landrum: Doing Things Differently

■ By Julie Schumann

**If Jim Landrum had any doubt he'd be returning to the water sports** he loves after losing his left hand and forearm due to a 2007 fire-works accident, his buddies quickly dispelled it.

"They told me I could either get in my car and drive over there, or they were going to come get me," says the 34-year-old from Missouri.

### Searching for a Solution

For Landrum, operations manager at Ozark Physical Therapy, Poplar Bluff, Mississippi, recovery from his accident meant getting back on the river—to his favorite fishing spots that were inaccessible by motor boat, and to more challenging white-water adventures.

"Any free time I have, I'm on the river, fishing and kayaking," he says.

Landrum's online search for sport prosthetic devices eventually led him to Advanced Arm Dynamics (AAD), Irving, Texas.

"What was out there on the market was designed by people who didn't really kayak," says Chris Lake, CPO, FAAOP, southwest clinical director for AAD. "It might work on a nice, calm lake, but not for Class 4 rapids. Jim showed us how the paddle needed to pivot. Jim also wanted to fish. The existing devices required switching attachments—not really practical when you're paddling and fishing at the same time. And once he got his fish, Jim wanted to be able to do something with it."

The eventual solution was a single waterproof sport prosthesis with a negative seal to keep water out and maintain good suction. AAD then modified Landrum's canoe and kayak paddles with protruding silicone handles that his prosthesis can grip securely.

### Test Run

When it came time for a test run of the new equipment in May 2008, stormy weather threatened. Advanced Arm Dynamics worked with Recovery Inspiration Success Empowerment (RISE) Adventures to locate an indoor pool that Landrum could use. The test was successful. Landrum was able to remove the kayak from the top of an SUV, get it in the pool, maneuver the paddle comfortably with a full range of motion, and get the kayak back out of the water and onto the SUV.

Landrum was thrilled. "Back home on May 10, I went kayaking and fishing, and on May 25, eight months after my accident, I paddled an Olympic Class 4 and 5 whitewater course with three of my buddies. It was the first time I'd gone on this section, which had been designed for the Olympic Games in Atlanta."

Next, Landrum challenged himself in a different way. He went to the lake and tried swimming without a prosthesis. "I was able to swim. It was incredible to know that I could do that and not swim in a circle. It really helps you feel confident in water sports."

According to Landrum, persistence is important for amputees pursuing an active lifestyle. "You have to challenge yourself as a person and don't ever give the option that it's not possible to do the things you love to do," he says. "You have to think how to redo things. Not that you can't do it, but how you can do it differently."

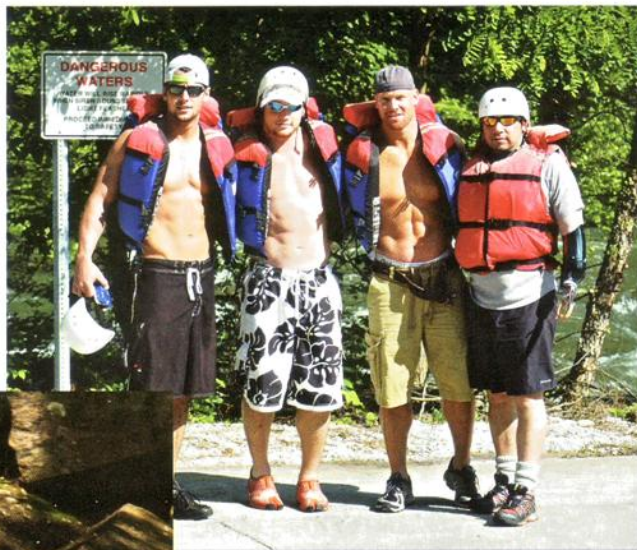
Landrum adds that amputees who want to be active must be proactive in their medical care.

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"When I went to my first consultation with Advanced Arm, I told them about every activity I'd been doing before the accident. It was like: 'Fishing? Okay. Kayaking? Okay. Rock climbing? We'll have to figure that one out.' I was willing to challenge myself to do these sports again, and they were willing to challenge themselves, too, to build me something that would work. I had no doubt we were going to succeed."

The collaboration between Landrum and his prosthetic team has been ongoing, with Landrum painstakingly demonstrating the types of motion different sports require, the prosthetic team developing prototypes, and then Landrum helping the technicians figure out what works and what doesn't.



From left: Eddie Dortch, Todd Tinsley, Austin Tinsley, and Jim Landrum pose before entering the water at Lower Ocoee, Chattanooga, Tennessee.



Jim Landrum (top) solos through rushing rapids.

"There's times when you have to take a step backward before you can go forward," Landrum says, "but I had confidence in what they were doing, and they had confidence in what I said and what I could do."

Landrum notes that comfort is a big issue for active amputees. "Once a prosthesis becomes uncomfortable, the sport is no longer fun," he says. "Everything I've gotten at Advanced Arm has been comfortable. The silicone lining massages the limb; it breathes, and there's no rubbing or looseness. I have no issue with wearing it all day long."

### Challenges Remain

Some motions, however, remain challenging. "Fishing is such a finesse sport, especially in a boat on moving water," Landrum says. "I hold the rod in my right hand and reel with my prosthetic hand. It's still tough to tie a hook, attach a weight and get the hook out of the fish. What I'm using now is working, but we're trying to figure out something better."

Landrum credits much of his success to his strong support network. "My friends and family were great, and the whole

community helped me," he says. "All of Poplar Bluff came together and formed the Jimmy Landrum prosthetic fund."

Along the way, the community that united to help Landrum has received something special in return. "People may not come up and tell you, but they are moved by the things you can achieve," Landrum says. "You're affecting hundreds of people every day. They think, 'If he or she can do it, maybe I can do it too.' That drives me."

Landrum continues to push preconceived notions of what amputees can do. Before his accident, Landrum enjoyed rock climbing in Missouri, doing rugged climbs of moderate difficulty with lots of handholds and vertical

overhangs. Soon he'll be trying out a new climbing prosthesis that employs the same negative suction that allows him to do pull-ups in the gym.

### New Possibilities

The possibility of rock climbing again has Landrum thinking about something else he wants to tackle—ice climbing. Before that can happen, however, Landrum and his prosthetic team have a lot of work to do.

"Advanced Arm wants me to be able to suspend myself on one arm with nothing but my prosthesis, so that even without the help of my other arm or a harness I can hold myself onto the mountain," Landrum says.

And if the ice-pick attachment makes it from the drawing board to a safe, useable device? "My dad and I are going to the Grand Tetons," Landrum says. **O&P EDGE**

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