

Brian Durante & Mike Skowronski

MARINE MECHANIC & ALVIN PILOT

Skowronski: I was an avid sailor since I was young, and I came across an article on [Alvin pilot] Pat Hickey with his more than 600 dives in *Alvin*, and I said, 'I can do that.' I came to WHOI in 2008, joined the *Alvin* Group, made pilot in 2010, and had 22 dives before the sub went in for the upgrade.

Durante: I was an auto mechanic and was an air crewman in the Navy. When I got out, I went to The Landing School of boat building and design in Maine. I love working on boats. I was lucky and got a job here, working as a marine mechanic.

Skowronski: As an *Alvin* pilot, I had a feeling for the equipment we wanted to put into the sphere and how much room it would take up. The ideal, of course, would be to put everything into the sphere in one piece, but everything had to fit through that 19-inch hatch hole.

Durante: The floor went in first, in three separate pieces. Everything came in in pieces and in sequence. Because once something was in, we couldn't get to it again from the outside. I can tell you, the sphere got small in a hurry. When the wiring harness went in, 100 pounds of wires were dropped in. The sphere looked like the creature from the movie *Alien* had just run through it with wires hanging and branching out like a spider everywhere. We started calling it the cerebral cortex.

Skowronski: In our heads, everything looked like it would fit. But in the sphere ... We had drawings and fabricated a mockup

sphere to test whether everything would fit. But the mockup will only get you so close.

Durante: Once we started putting in pieces of the structure, it was, 'That's crooked' and 'This won't fit.' It's a lot harder working inside a sphere than a square box. You really have no reference points to start with. There is no left or right until you make them. That's the challenge.

Skowronski: As we installed, we modified and adapted components. We had a summer intern, Logan Driscoll, who was doing CAD drawings on the sub's interior. We'd run into a problem and go to Logan and say, 'See what you can come up with on the computer,' and he'd come back, and say, 'Yes, that'll work,' or 'Adjust this.'

Durante: Or sometimes, the computer model said it won't fit, but we found a way. I did a lot of 12-hour days in that sphere. You tried not to go in and out to minimize any possible damage. We had a toolkit that stayed in the sphere. My social life went from 90 miles per hour to zero over the past two years.

Skowronski: By the time *Alvin* was finally finished, we were glad it was leaving. And also sad it was leaving. We had postpartum depression. It took a significant part of our lives.

Durante: We're proud of what we accomplished. There is no other sphere like it in the world. ▲



Tom Kleindinst/WHOI