SAIL®

Memo from Rebecca Waters

Scott and Pamela -

thanks again for all your help. Hope you enjoy the article.

Cheers - Rebecca

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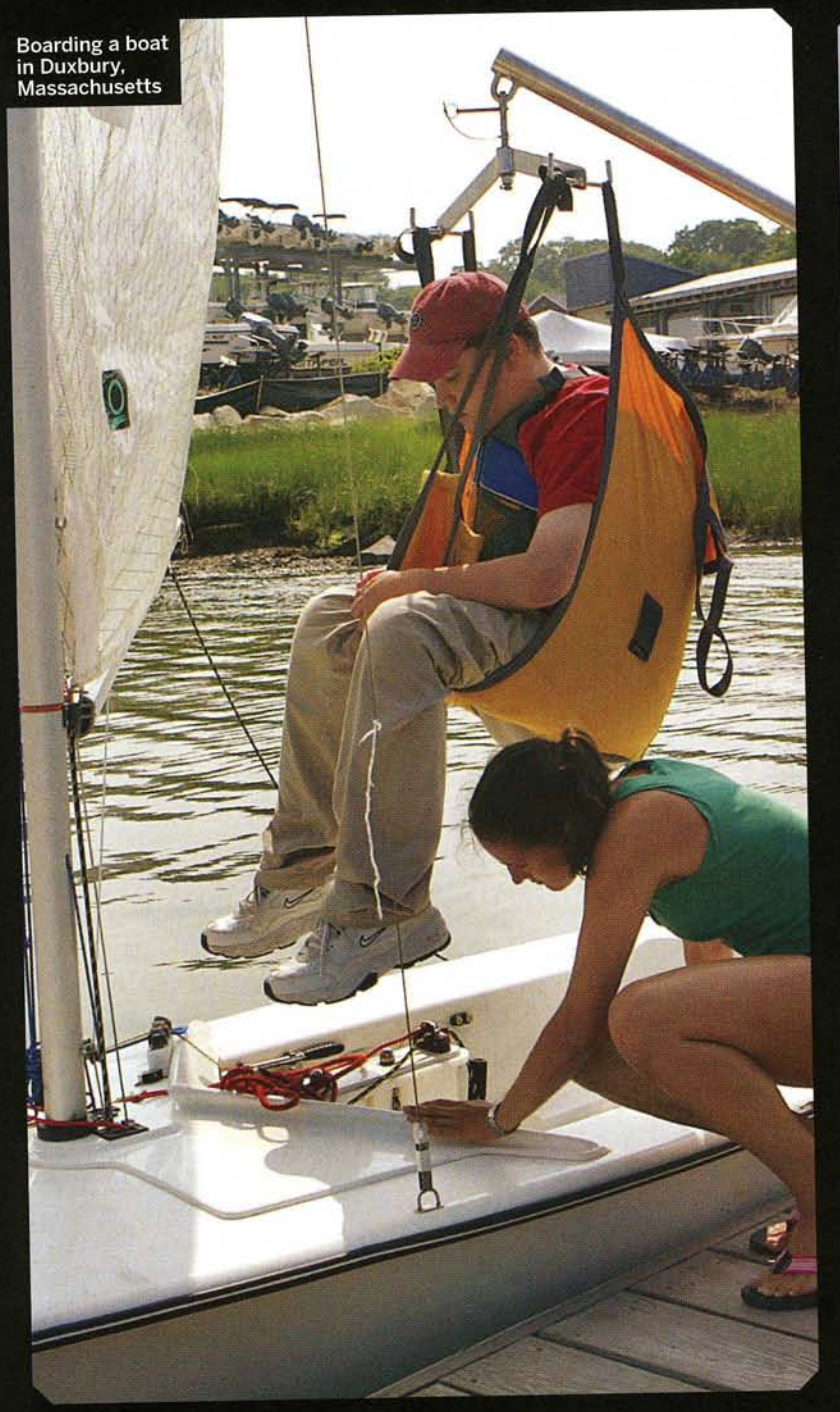
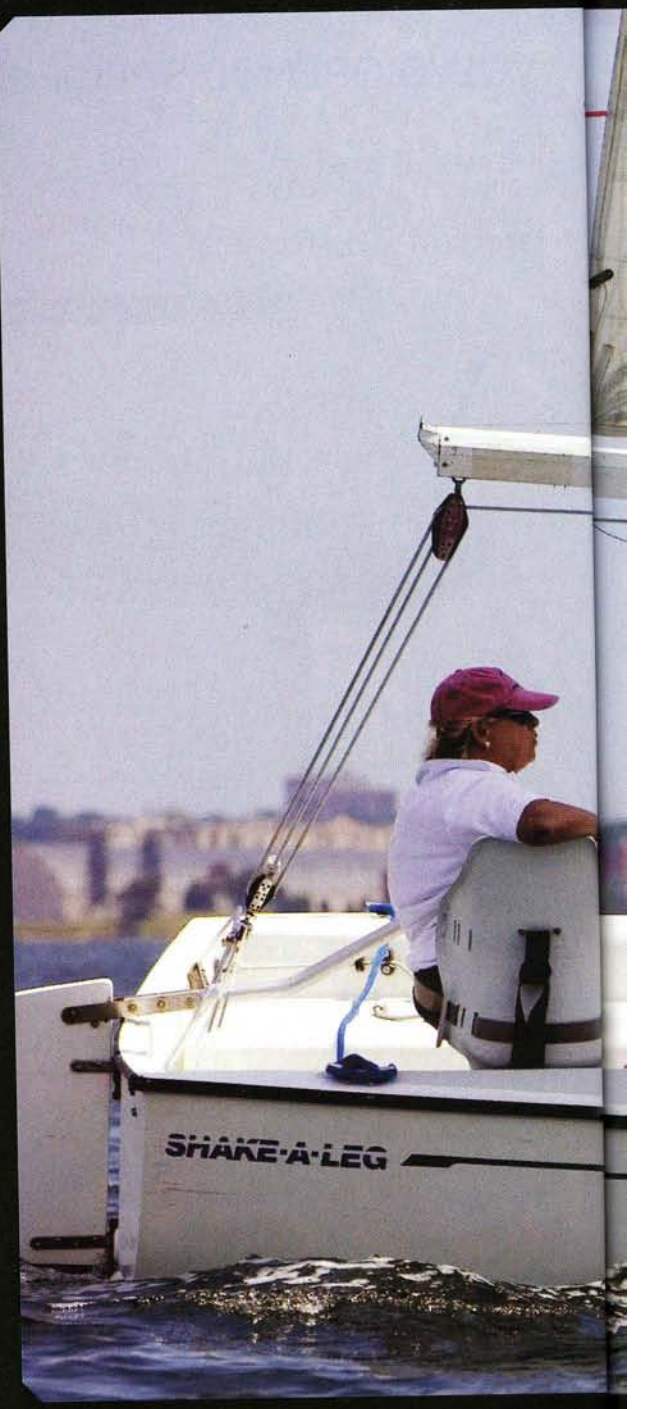


Boarding a boat in Duxbury, Massachusetts



DISABLED SAILING

People with spinal-cord injuries or other disabilities can discover freedom on the water

ENDLESS POSSIBILITIES UNDER SAIL

BY JULIET R. M. AUCREMAN

PHOTOS BY MARK LEWIS/THE BOSTON GLOBE (LEFT); CORY SILKEN (RIGHT)

Shake-A-Leg sailors cruise off Newport, Rhode Island

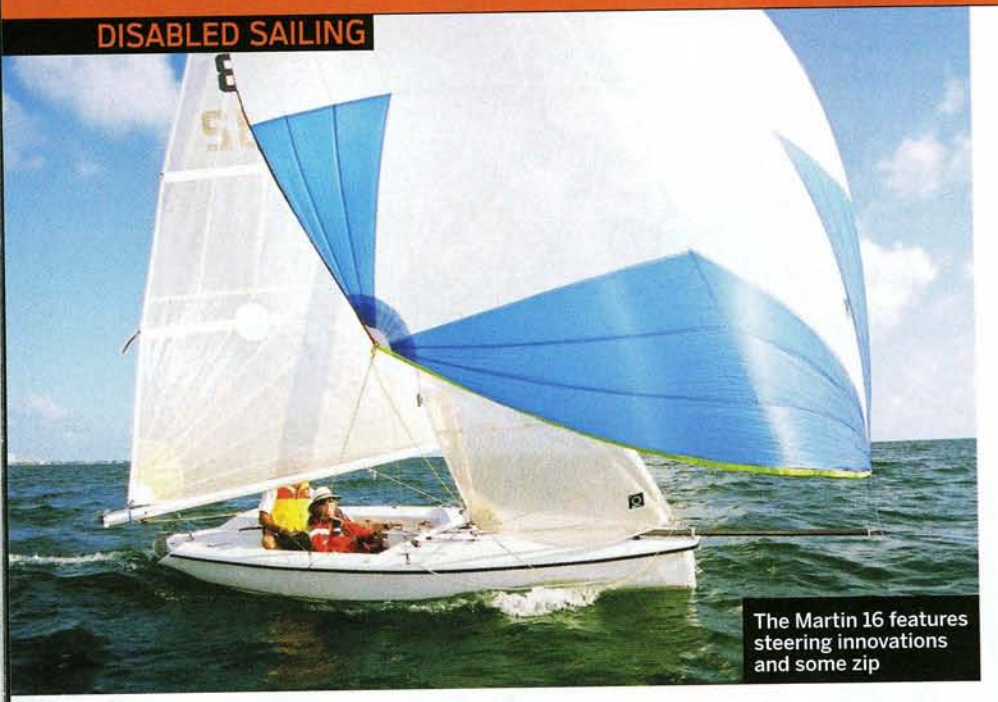
ABOUT EIGHT YEARS AGO, THE WORLD OF DISABLED SAILING CHANGED OUR LIVES. My husband, Corky, had a chance meeting with Jon Ross-Duggan, a former Hobie 16 national champion. Corky, who was once a competitive Hobie sailor, remembered well the 1977 car accident that left Jon a quadriplegic and ended his Hobie career. What Corky didn't know was that Jon hadn't stopped sailing. He had, in fact, won a bronze medal when sailing debuted as a demonstration sport in the Atlanta Paralympic Games in 1996.

Though Corky was once a contender at the 1985 Hobie 18 World Championship, he has never been a typical sailor. Corky was born without a left hand. He joined Jon's team, and, along with Waldo Esparza, they won the 1998 World Championship for Disabled Sailing.

But it hasn't been about the racing. Just as Lance Armstrong says "It's not about the bike," disabled sailing is not just about the boat or the race. It's about learning, growing, and giving back.

UNIQUE MOBILITY

Board a boat, take the tiller, and watch the wind blow the world's woes away. Sailing delivers a sense of freedom that people with disabilities don't often experience. And with a few simple adaptations to the boat (see "Making It Work"), sailing can erase impediments.



The Martin 16 features steering innovations and some zip

Sailing is also one of the few sports that levels the playing field for the disabled. In 2000, Corky sailed a Sonar with Paul Callahan and Keith Burhans in the Sydney Paralympics, where they finished seventh. They went on to compete in Sonar one-design races all over the U.S. against able-bodied crews. Skipper Paul Callahan, a quadriplegic, could not switch sides in the boat. Mainsail trimmer Keith Burhans has two below-knee prostheses. Corky trimmed the jib, and as a team, they consistently placed in the top third.

But why should equality matter so much? Talk to Urban Miyares of Challenged America in San Diego, a former world-class skier who is now blind, and he'll tell you that becoming disabled transforms people from feeling like a "someone" to believing they're a "no one." People born with disabilities experience this from the start. But doing something others are doing, and doing it well, can change that mind-set.

When sailing is used for rehabilitation, as it is by Shake-A-Leg, Challenged America, and similar programs, the point is not the sailing, but getting back into the mainstream. As a disabled person starts feeling more like a "someone," a cycle of positive change begins.

THE COMMUNITY

Adult disabled sailors tend to be gutsy, gritty, and good-humored. They meet formidable challenges at home and, in sailing, grapple with narrow, shaky docks, Hoyer lifts, accidental gybes, capsizes, and more. Many were athletes when they were able-bodied.

At the grass-roots level, it's not about the racing. Like many accessible-sailing programs, Shake-A-Leg Newport serves a community of physically and developmentally disabled boys and girls, men and women from 7 to 70 and often their families. For some, it becomes about the racing. Karen Mitchell, a paraplegic, and Kerry Gruson, a quadriplegic, were introduced to sailing at Shake-A-Leg Miami. This year they won the North American Challenge Cup for the third time in a row, and Karen has her eye on the 2008 Paralympics; she would be the first female skipper.

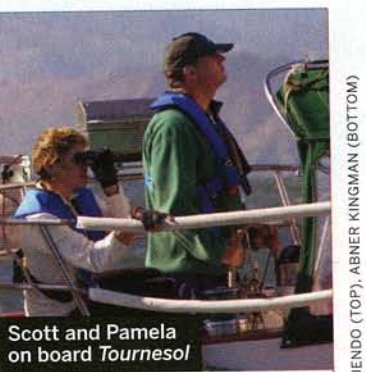
A big part of the disabled-sailing community is its fan club. People come to provide help, often more than once. Five-time Rolex Yachtswoman of the Year Betsy Alison has dedicated her considerable energy to the field, inspiring, coaching, and wheedling the best out of sailors and supporters. International Federation of Disabled Sailors (IFDS) president Serge Jorgensen has spent years training disabled sailors both through his organization, Sailing Alternatives, in St. Petersburg, Florida, and as a coach at numerous national and international disabled regattas, including the Paralympics. Countless others, some with specialized training, donate their time. I found that my master's degree in occupational therapy was less important than the water, the wind, and the laughter.

A NEW VIEW ON THE WORLD

Though neither of them can legally drive a car, blind couple Scott Duncan and Pamela Habek can sail on their own. In the fall of 2004, they set sail from San Francisco on the first circumnavigation by a legally blind crew. In June they completed a 2,870-mile passage from Mexico to French Polynesia on board *Tournesol*, a Valiant 32.

Duncan and Habek use various visual and navigational aids to overcome their limited sight; on their Web site, www.blindsailing.com, you can see a rendering of Duncan's impaired vision. They use magnifiers and telescopes for reading charts and viewing obstacles at a distance. Two computers adapted with speech output run e-mail, weather, and navigation programs. A talking GPS system also aids navigation by identifying position, speed, direction, and orientation to waypoints.

Docking and coastal navigation are their biggest challenges. "We are most comfortable 1,000 miles from land," said Duncan. "GPS and radar help with stationary objects, but our reaction time when avoiding moving objects is shortened compared to sighted sailors." Approaching land, Duncan and Habek err on the side of caution. "We never make landfall in the dark, and we spend many nights hove-to near our destination. If we are not comfortable entering a busy or foreign port, we accept help from a pilot boat."



Scott and Pamela on board *Tournesol*

Along the way, Duncan and Habek are meeting with other blind people, visiting schools for the blind, and spreading their message of empowerment. "This voyage is about sharing our experiences as blind people and the belief that we should never let others determine our limitations," they said. Rebecca Waters

PHOTOS BY MARCO OQUENDO (TOP), ABNER KINGMAN (BOTTOM)

LEVELING THE RACECOURSE

The Functional Classification System for Disabled Sailing is a rating system administered by doctors and physical therapists familiar with functional sailing. The rating makes it possible for sailors with different levels of disability to compete fairly against each other. Each sailor is given a score from 1 to 7 depending on the severity of his/her disability. For a team to qualify for an IFDS event, its total score cannot exceed a specific number. (For example, 14 points is the limit for a Sonar crew.) Sailors form teams by maximizing people's strengths within these racing parameters. J.R.M.A.

THE POSSIBILITIES

Racing has brought disabled sailing into the limelight, but competition isn't the real point. If you know the rules of the road, have a sound mind, and can sip from a straw, you can skipper a boat. A quadriplegic—four limbs neurologically paralyzed or compromised—can sail a small boat alone. Many quadriplegics have partial use of their upper extremities, so they can steer if a tiller is strapped to their arm. Others use a joystick tiller. A quadriplegic with little or no voluntary movement in the limbs can use a sip-and-puff mechanism to steer and sheet in, even if he or she is breathing with a pulmonary device. Or, it takes just a quarter- to half-inch of thumb to operate a fiber-optic device that performs these functions.

Sophisticated prostheses aid amputees. A sailor who had lost both arms in an accident was the mainsail trimmer—with his bare feet—at the Sydney 2000 Paralympic Games. Blind people need only a novice on board to provide visual cues. Devices, including an audible compass, can help keep a blind helmsman on course.

WHAT BARRIERS?

Many of the barriers to disabled sailing are problems for sailing in general—limited access to the water, enough programs to fill the demand, fears about liability. In fact, adults with disabilities are extremely safety-conscious. Since its inception in 1979, Challenged America has had no claim filed against it, though thousands have sailed in its program.

Most boats can be modified for universal accessibility. An accessible-sailing program can be launched with a small fleet of adaptable boats and a few dedicated instructors and volunteers. Popular raceboats include the Sonar, and the Martin 16. But to go sailing, you need adaptive gear to make a boat go, and the list of good boats is long.

Though there are many perceived barriers to adaptive sailing, the worst is its obscurity. If people don't know about it and its potential for rehabilitation, they can't get to the dock and out on the water. And that's the first step.

Juliet Aucreman is working on a book about disabled sailing.

MORE ONLINE
For a comprehensive list of accessible-sailing programs, go to sailmagazine.com

MAKING IT WORK

Serge Jorgensen has seen it all. The former U.S. Paralympic racing coach and current president of the IFDS recalls the crude plywood planks sailors used to slide across a Freedom 20 during the 1996 Paralympic Games; now they're built of carbon fiber. He admires the clever steering invention on Paul Callahan's Sonar—by using the pedals of a tricycle, Callahan, a paraplegic with limited strength in his triceps, hand-pedals forward and backward to steer the boat left and right. A Harken camcleat fixed to a trimmer's prosthetic arm; shortened leg prosthetics to lower a sailor's center of gravity; a watch embedded in a prosthetic arm—on a sailboat customized for a disabled sailor, necessity is the mother of invention.

STEERING: For sailors who can't grip a tiller, there are multiple steering alternatives. On a 2.4-Meter keelboat, for instance, a sailor with use of his hands but limited arm strength/range can use a line-steering system rigged beneath the deck. Others steer with their feet, using foot pedals. Some keelboat helmsmen who can steer by hand might need to stay on the same side for both tacks. One of the several steering options on the Martin 16, a Don Martin design built expressly for disabled sailors, is a joystick that controls the boat's transom-hung rudder.

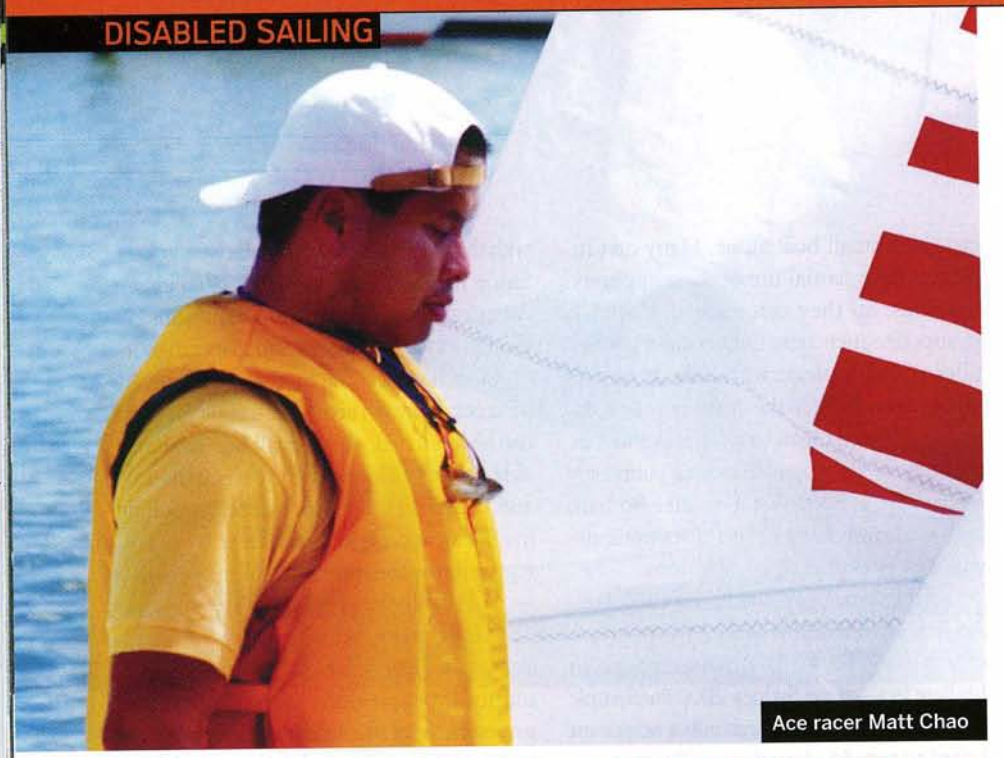
SITTING: The latest innovations on raceboats include seats that self-level and even self-tack from side to side. Depending on the sailor, a bucket seat might be ideal for added leverage. For example, a paraplegic with weak abdominal muscles could get pulled toward a control line without solid low-body support. Jorgensen points out a practical concern for sailors with prosthetic limbs: If you can't feel a limb, it's hard to keep track of it in the heat of a race. Some sailors tie their ankles and/or knees together to keep them from getting tangled.

SIP AND PUFF: In addition to its joystick steering option, the Martin 16 features sip-and-puff technology. Adapted from devices used to operate wheelchairs, the Sip and Puff Module sends commands to the Martin's Power-Assist System. A high-quadriplegic sailor can control the helm and trim sails by inhaling and exhaling. Two pneumatic straws are attached to a control stalk mounted on the sailor's chest; one controls the rudder and the other operates a sheet windlass mounted on the top of the keel. There are two drums on the windlass, around which the jib and main are trimmed simultaneously. **Josh Adams**

Jon Ross-Duggan's custom sailing chair

PHOTOS BY MARCO OQUENDO (TOP), ABNER KINGMAN (BOTTOM)

PHOTO BY CHRIS ODOM/US SAILING



Ace racer Matt Chao

BLIND SAILING, BLIND TRUST

Following along with a sailor who competes without sight

BY MATTHEW CHAO

With two minutes to go to the start, we jockey for position. The fleet of six J/22s maneuvers in a moderate wind on an October afternoon. I feel prerace butterflies in my stomach. Must focus on the race, I tell myself; listen to my crew counting down to the start.

"One minute," says Richard Kaseler.

"Got it," I respond, bearing away and easing the mainsheet.

"Head up to close-hauled," Richard commands.

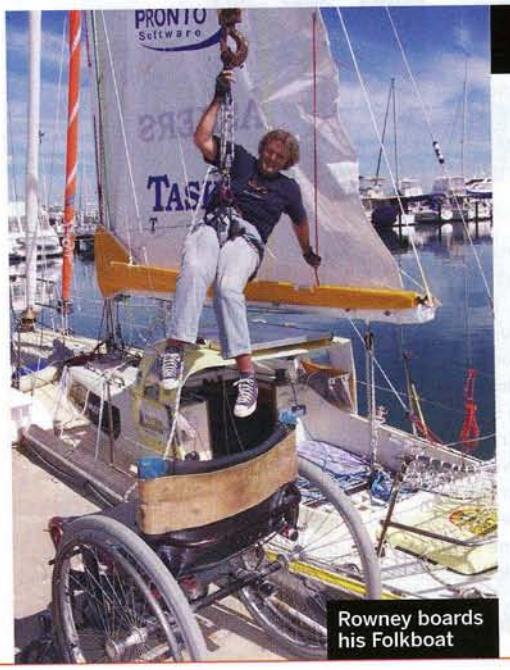
"Close-hauled," I repeat. We're driving to the starting line. There's an opening at the committee boat, and we want to barge in there. At the last second another J/22 closes the door by going head-to-wind.

We're approaching the committee boat quickly. We can't stay here. "Okay, we have to bail out," says Richard. "Do a quick tack and a crash gybe."

"Quick tack and fast gybe, aye," I respond, pushing the helm over and easing the mainsheet. I hear the sheet run through the block, notice the changing wind angle, and feel the boat heel. As we complete the gybe I sense the committee boat behind us. Suddenly I hear, "Oh, my God, he's blind!" As we come up to a close-hauled course and cross the starting line, I begin to laugh, yet at the same time remain focused. After all, we are racing.

When we think of blindness, many of us think of it as a state of mind, as in "blind to the fact." But I'm talking about being *really* blind, unable to visually see anything. Blindness has been a part of my life for all of my 51 years; I'm a B1 sailor, which means I have no sight at all. But there are different ways of seeing, and I put them to work out on the water.

Competitive sailing combines science, muscle memory, self-confidence, freedom, and trust. For me it's also a multi-processing experience—integrating communication, intense concentration, touch, boat feel, heel, wind angle on my face, the sound of waves, and knowledge based on years of experience. I also exercise my



Rowney boards his Folkboat

ROUNDING OZ

Mike Rowney, a professional skipper of 15 years, lost the use of his legs after breaking his back while repairing a boat. "I love big yellow banana moons and glassy seas, and I love sunny days sailing close on the outside of a reef observing the life," he says. Unwilling to give this up, Rowney got back out on the water as soon as he recovered. Now he's testing himself on a 7,000-mile circumnavigation of Australia.

In April Rowney headed north from Fremantle, Western Australia, aboard *Gypsy Rose*, a 26-foot Swedish Folkboat. Rowney has had to modify his boat. In addition to leading lines aft to the cockpit and rigging both his genoa and storm jib with roller-furling, Rowney developed a system for deploying the anchor from the cockpit by running the chain through a pipe along the deck. A fiberglass bubble over the cockpit, where he spends most of his time, protects him from the elements. He wears a safety harness at all times and attaches lifting tackle to the harness to move across the deck or down into the cabin.

Sailing *Gypsy Rose* is hard work for Rowney, but it pays off when he goes ashore to focus on the purpose of his trip, raising money for Wheelchairs for Kids, a project aimed at providing mobility to children in developing countries. Each wheelchair costs $100 to build, and Rowney has already raised enough money for 150 chairs. "I'm not out to prove anything," he says. "Only to satisfy my own need for adventure and look after my disabled kids." R.W.

PHOTO COURTESY OF PEG HAWKINS (TOP); JAN BARRIE (BOTTOM)

"virtual vision," how I imagine certain things to be, such as the shape of the racecourse and our position on it, or the sound of another boat going through the water and its position relative to ours. I'm thinking of these things in my head faster than I could write or read this.

On the racecourse these things happen instinctively. While processing this information, I'm listening to my crew give me steering commands—"up five" or "hold that"—and feeling the boat respond to course and sail-trim changes. When everything clicks, there's that feeling of satisfaction and excitement that you feel—with or without sight—in the racing environment.

Richard hadn't heard what transpired back at the starting line. "What are you laughing about?" he asks after the start.

"I can't tell you right now," I say. "Wait until the mark rounding." I'm focusing hard. We get to the first mark, round it, and bear off on the downwind leg. After the rounding, I tell him the story. He has a good laugh, and we continue the race.

"Keep this angle," says Richard. The fleet is coming together; it's going to be a tight group at the mark. Only a few feet separate our boat from some of the others. "Up hard now!" Richard commands.

I exercise my "virtual vision," how I imagine certain things to be, such as the shape of the racecourse and our position on it, or the sound of another boat going through the water and its position relative to ours

"Standard turn," I reply. As we trim main and jib, I continue turning up to close-hauled on port tack. "Faster on the turn," Richard adds. As we reach a close-hauled course on port tack, I sense windshifts and adjust the mainsheet accordingly.

We continue to the finish of the windward-leeward course. Richard considers tactics; I keep us on a straight track. Occasionally he'll call for a tack or a minor course correction to optimize our speed. "It looks like we'll have to shoot the line," he says. "Shoot the line, now!" I head up almost head to wind, the boat flattens, and a whistle blows. We fall off onto a close-hauled course and head for shore.

While unrigging the boat, we review the day and discuss our "close-order drill," our term for maneuvering in tight quarters. "How much clearance?" I ask. About a foot and a half, says Richard. "Sounds good to me. That drill was something. I could see we had to move pretty fast."

"I expect nothing less," says Richard. That's his way of saying that I'm like every other competitor. Being blind is secondary.

We finish putting the boat away. After a few minutes the launch arrives, and we clamber aboard. At the dock, I take Richard's arm and we head up to the club for that hard-earned cold one.

Matthew Chao lives and sails in Boston, Massachusetts.

LARS RETURNS

When two-time Brazilian Olympic bronze medalist, national Tornado champion, and author Lars Grael, 41, won the Star South American Championship earlier this year, he capped off one of the greatest personal comebacks in recent sailing history. Grael has only one leg. He lost the other in 1998 when, practicing on his Tornado, a 40-foot powerboat struck from astern. The propeller severely cut his right leg, which was eventually amputated.

"During the first few days, while fighting for my life, I never thought I would sail again," Grael says. "Sitting in a wheelchair and watching the boats and birds would be good enough." But as his strength returned, his brother Torben (of Olympic fame) convinced Lars to get back on the water. Three months after the accident, Grael successfully competed in a hometown regatta.

Climbing to the top of the competitive sailing world is difficult. Doing it twice, the second time without a leg, is extraordinary. Grael continues to compete against some of the world's top able-bodied sailors. In addition to racing Stars, he recently skippered a 12-Meter in the class's world championship off Newport, Rhode Island, and plans to continue racing through 2007.

Would he consider making a bid for the 2008 Olympics in Beijing? "I don't think so," Grael says, noting tough competition in the Star class between Torben, Robert Scheidt, and Alan Adler. "I don't think there will be much of a chance over those three favorites. Besides, now I sail for competition, fun, and passion." Dave Baldwin

Lars Grael at the helm

PHOTO COURTESY OF PEG HAWKINS (TOP), JAN BARRIE (BOTTOM)

PHOTO COURTESY OF RENATA GRAEL