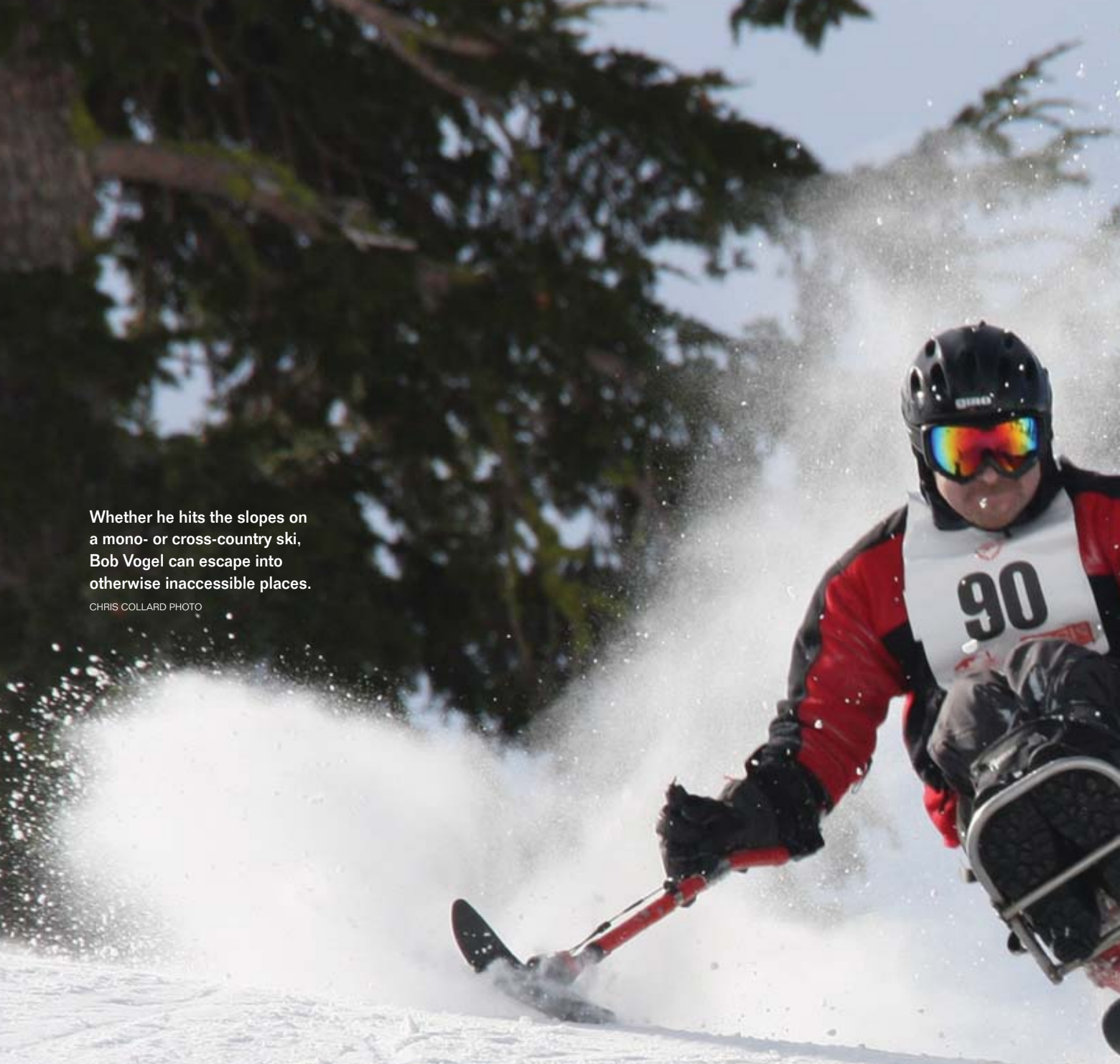


Whether he hits the slopes on a mono- or cross-country ski, Bob Vogel can escape into otherwise inaccessible places.

CHRIS COLLARD PHOTO

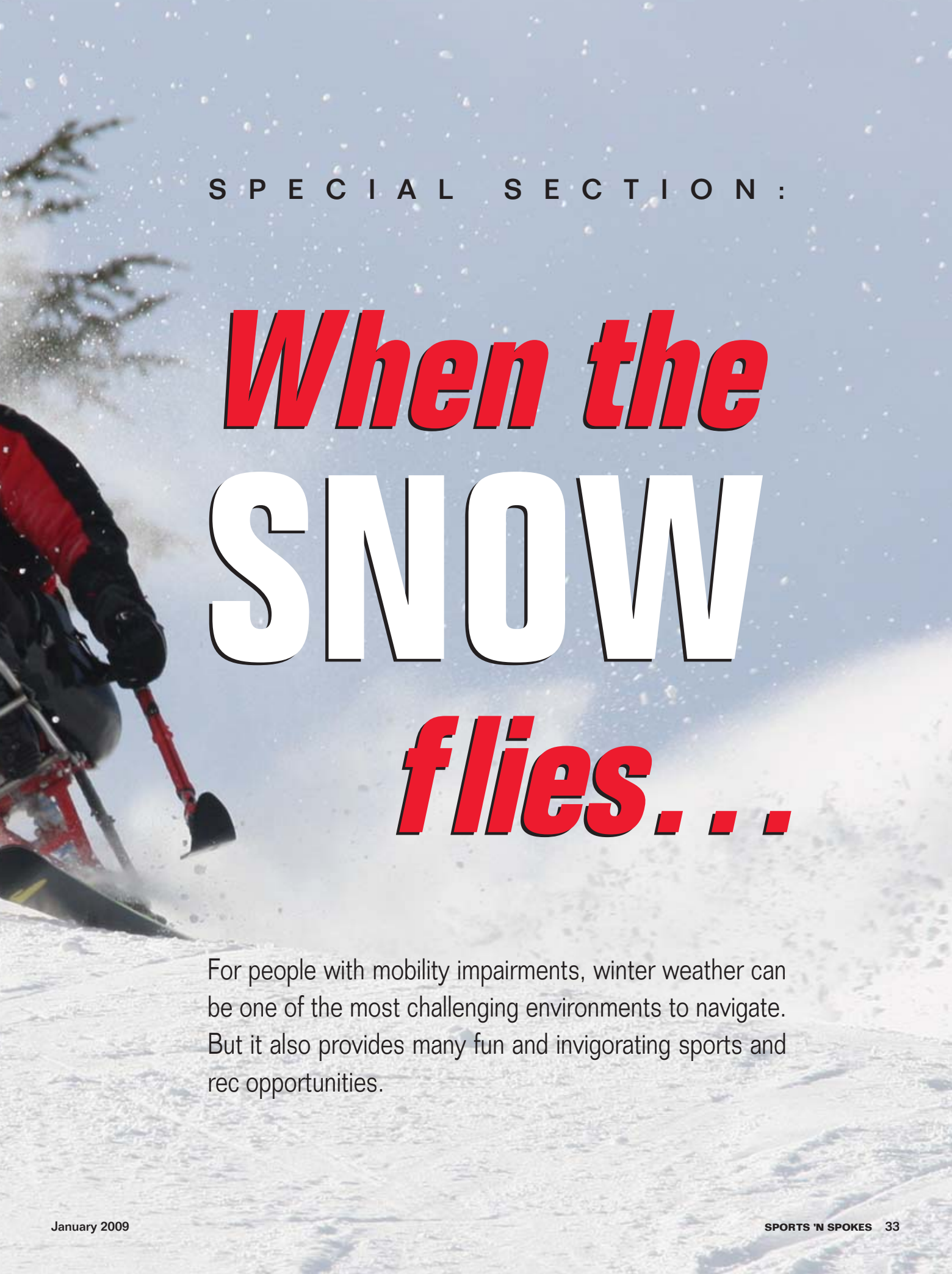
Adaptive Skiing Resources

- **www.dsusa.org/chapter**
Local chapters of Disabled Sports USA (DSUSA) for info on local adaptive alpine and Nordic ski programs.

- **www.dsusafw.org**
Adaptive alpine ski instruction in North Lake Tahoe, Calif.

- **www.turningpointnation.org/tahoe**
Adaptive Nordic ski instruction in North Lake Tahoe, Calif.

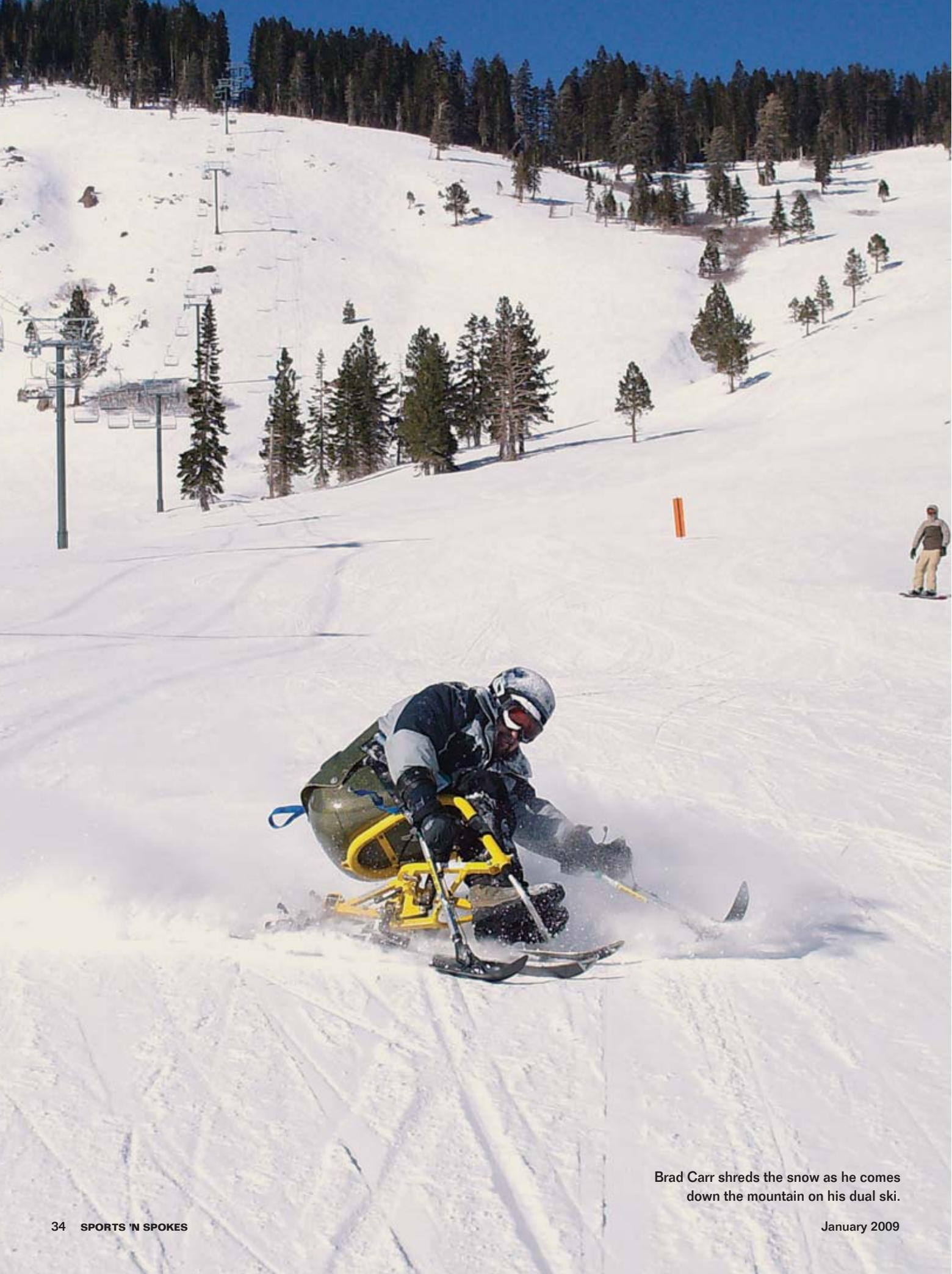
- **www.sitski.com**
Information on adaptive ski equipment and other resources.



SPECIAL SECTION:

When the SNOW flies...

For people with mobility impairments, winter weather can be one of the most challenging environments to navigate. But it also provides many fun and invigorating sports and rec opportunities.



Brad Carr shreds the snow as he comes down the mountain on his dual ski.

ABOVE: Robert Witherell (circa 1984) enjoys a trip up the chairlift in his Arroya, the first downhill sit ski.

SPECIAL SECTION:

SKI School

by Matt Strugar-Fritsch

Whether it's downhill or cross country, adaptive skiing offers the ideal environment for ability and challenge to intersect and create an adventure of a lifetime.

Most people with disabilities go to great lengths to avoid winter conditions, and when it snows they usually stay inside or migrate to a more moderate environment. Although getting to the mountain can be a great challenge, skiing on it can be one of life's great opportunities.

Today, with the use of specialized adaptive equipment, nearly anyone with any disability can access the slopes. However, this wasn't always the case. When the U.S.'s first adaptive ski school was created 41 years ago on the slopes of Donner Summit in northern California, a group of World War II veterans invented a way for single-leg amputees to ski . Over the next 11 years, adaptive ski technology and instructional programs advanced due to the influx of returning veterans with disabilities from the Vietnam War.

In 1978, the U.S.'s first downhill sit-ski, the Arroya, was invented by paraplegic Peter Axelson while he was a product-design and mechanical engineering student at Stanford University.

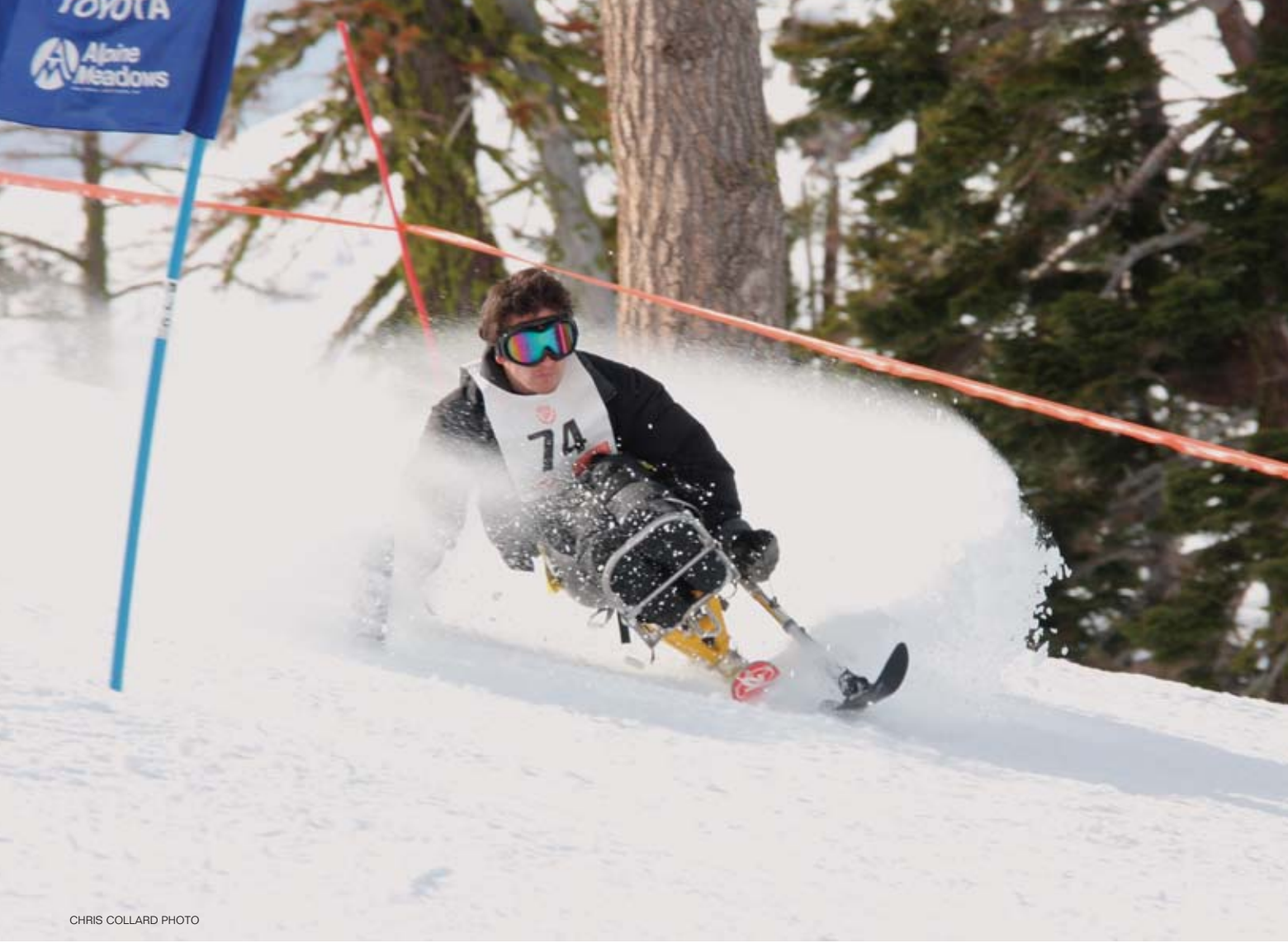
Robert Witherell (Fair Oaks, Calif.), a T6 paraplegic and Arroya owner, distinctly remembers the good, bad, and scary times he had with this ski.

"The Arroya was the first and only option for paraplegics and quadriplegics to get on top of the mountain and get the thrill of going downhill fast," he says. "It didn't matter what its strengths or limitations were, because it was the only thing available besides sliding down the hill on a garbage-can lid. It was the first creation in the evolutionary process of sit-down adaptive skiing, and it changed a lot of people's lives."

The next step in the evolution of adaptive snow skiing was the invention of the mono-ski, another Axelson creation. The mono-ski incorporates a linkage system and single shock absorber similar to the suspension on many motorcycles. This gives people who can't ski standing up, but who have excellent balance and coordination, the ability to independently ski everything from beginner to expert terrain. Participants use outriggers, which are a short type of Canadian crutch with ski tips on the end for balance, timing, and basic control movements.

Perhaps the single biggest benefit of the mono-ski is that it allows people to independently load and unload from chairlifts. Most mono-skiers have disabilities below the T6 level, but with patience, practice, and instruction, higher-level paraplegics and quadriplegics can learn to mono-ski independently as well.

"The first time I mono-skied with Disabled Sports USA Far West, it was incredible!" says Jackson McBrayer, who has cerebral palsy and uses a wheelchair part-time. "I never thought I would be so mobile on such challenging terrain, but the mono-ski has taken me places I never dreamed I



CHRIS COLLARD PHOTO

Feeling the need for speed, Jackson McBrayer cruises into overdrive on the Alpine Meadows/Lake Tahoe ski slopes.

would go. Once I'm in my mono-ski, my disability becomes irrelevant and I'm free to go where I want to go, see what I want to see, and ski where I want to ski."

"Helping participants transition from dependence to independence on the mountain is what keeps me excited about my job year in and year out," says Haakon Lang-Ree, program director at Disabled Sports USA Far West. "It's incredibly powerful for the participants, their families, our volunteers, and our staff to be a part of this exciting experience."

Changing Mind-set

The bi-ski, invented by Mike "Milty" Miltner (Reno, Nev.) in 1986 after he spent a year volunteering with Disabled Sports USA Far West, was created to open up the mountain to potential sit-down skiers who had more highly involved balance and coordination issues. These include people with muscular dystrophy, high-level paraplegics and quadriplegics, spina bifida, cerebral palsy, triple and quadruple amputations, and those with severe cognitive and developmental disabilities.

A bi-ski has two independently articulating skis on its undercarriage and sits lower to the ground than a mono-ski to increase stability. Participants use the same style outriggers as mono-skiers, which aid in turning, stopping, and pushing around the mountain. Initially, able-bodied instructors use a tether to safely control direction and speed. The bi-ski's main downfall is there is no suspension system and it can't be loaded on and off the chairlift independently. However, once on the mountain, users can independently ski beginner to advanced terrain.

"The invention of the bi-ski really changed the mind-set of people with high-level disabilities," Miltner says. "It affords skiers with independence, which is key to the whole experience."

Miltner's major motivation for teaching skiers and instructors is to use the experience of learning and success to show people "there is a whole lot more out there that they can avail themselves of than maybe they've been told."

Disabled Sports' one-liner slogan condenses this entire philosophy: "If I Can Do This, I Can Do Anything!"

Freedom from Disability

Lisa Kus (Reno, Nev.) has muscular dystrophy and has been an avid bi-skier since 2006. She uses a Mountain Man bi-ski on a tether and skis with an instructor and volunteer.

"My favorite things about skiing can be summed up in two ways. First, freedom from disability. Skiing makes me feel physically strong, powerful, and free from any limitations. Skiing is a true vacation from muscular dystrophy. My boyfriend told me once, 'Lisa, you're never more beautiful than when you are on the slopes.'

"Second, I can't ski at all without the help of other people. What irony! Sometimes the dependency that accompanies disability is such a curse. The fact that I need other people to ski has

helped me let my guard down, to take risks, and to ask the very best of myself. The instructor and assistant who give so freely of their time and skill to make it possible for me to ski connect me to human beings in their finest, most selfless moments of brotherhood. How I would have missed that were I able to ski independently."

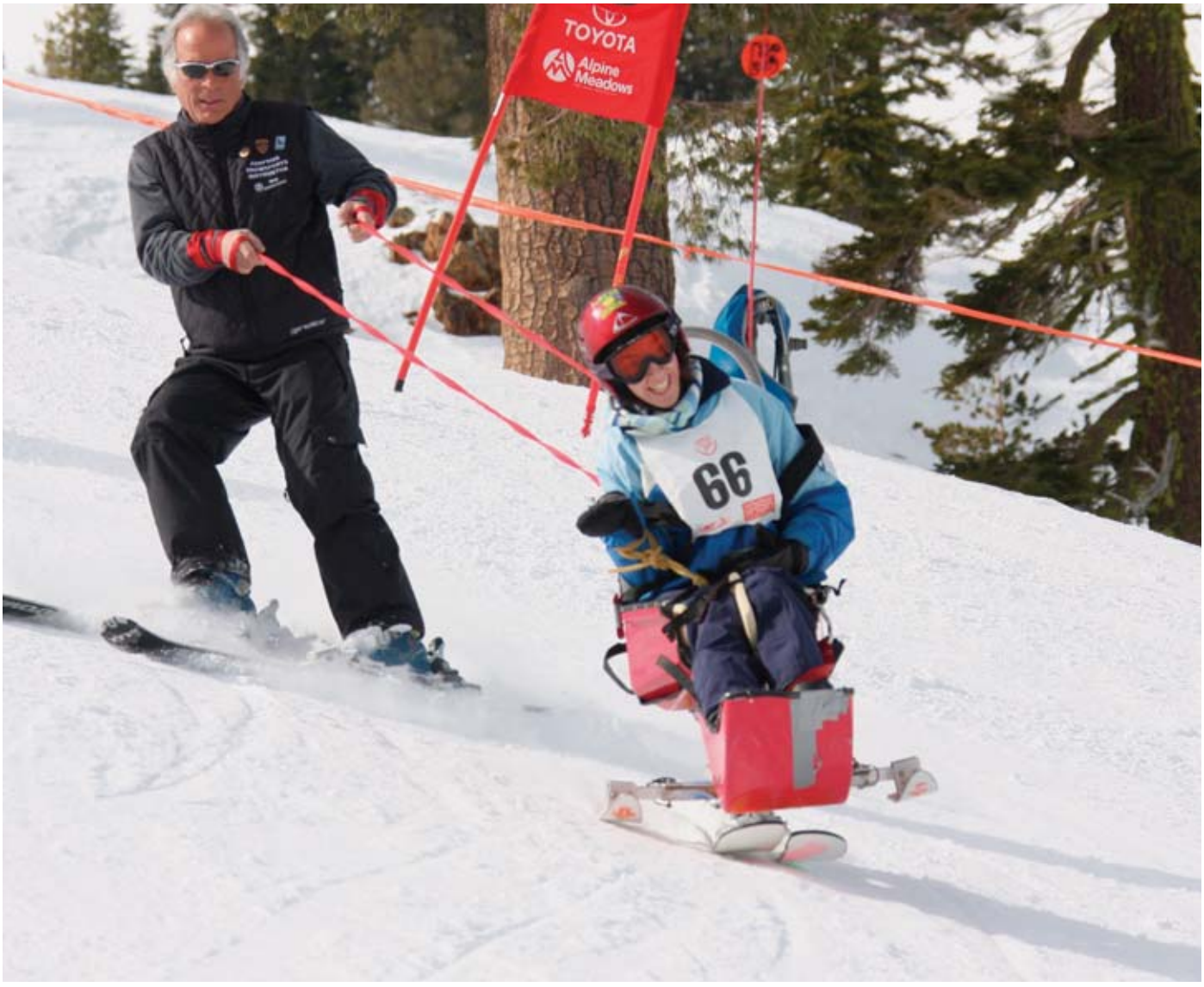
The dual ski bridges the gap between a mono-ski and a bi-ski. It uses mono-ski-like suspension but has two skis instead of one for more stability on the snow. For skiers like T3 paraplegic Brad Carr, this is the ski of choice. Carr, who works as a civil engineer during the week, learned to ski with Disabled Sports seven years ago and now skis at Mt. Hood, Ore., on the weekends.

"I don't have the balance to carve a mono-ski, and I wanted to be able to ski independently with my friends, so the staff at Disabled Sports took this into consideration and taught me to ski using a dual ski," he says. "Now I live for skiing fast, deep snow and cold face shots of fresh powder. The equipment needs to progress more, especially developing a better suspension system for the dual ski. But in the meantime, I will continue riding hard and pushing the limits of myself and my dual ski."

Adaptive XC Skiing

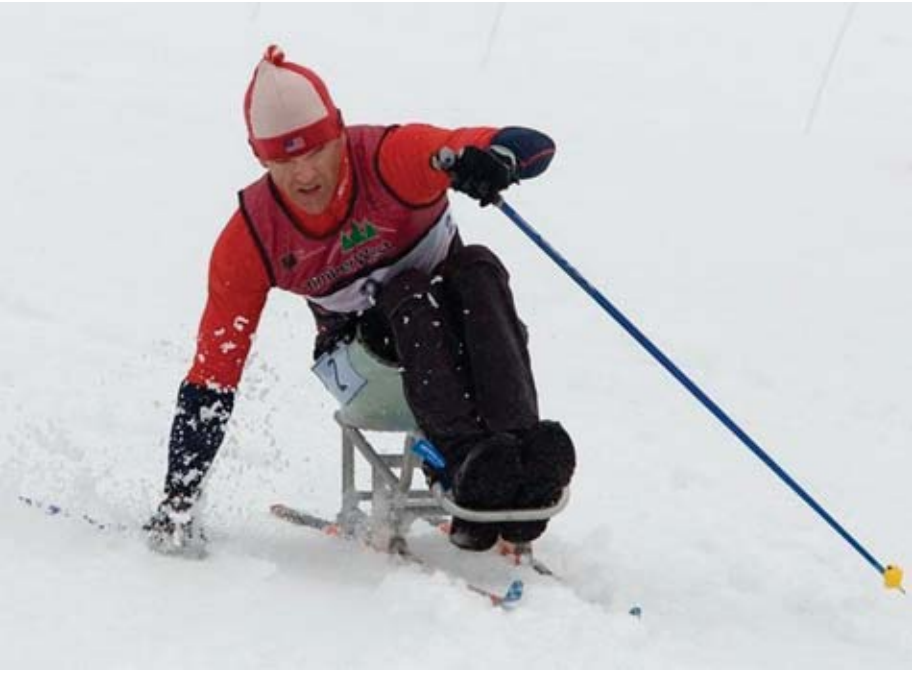
As strange as it may seem, adaptive cross-country skiing is an excellent outside winter activity for people with mobility impairments. While the thought of pushing through the snow may seem exhausting or even impossible, it is actually quite fast, and even first-timers can keep up with intermediate able-bodied skiers. Adaptive Nordic equipment, which is very primitive, simple, and minimalistic in design, allows anyone with a strong upper body to glide across the snow and into the pristine winter wilderness.

While adaptive Nordic skis have been around for more than 20 years, little



CHRIS COLLARD PHOTO

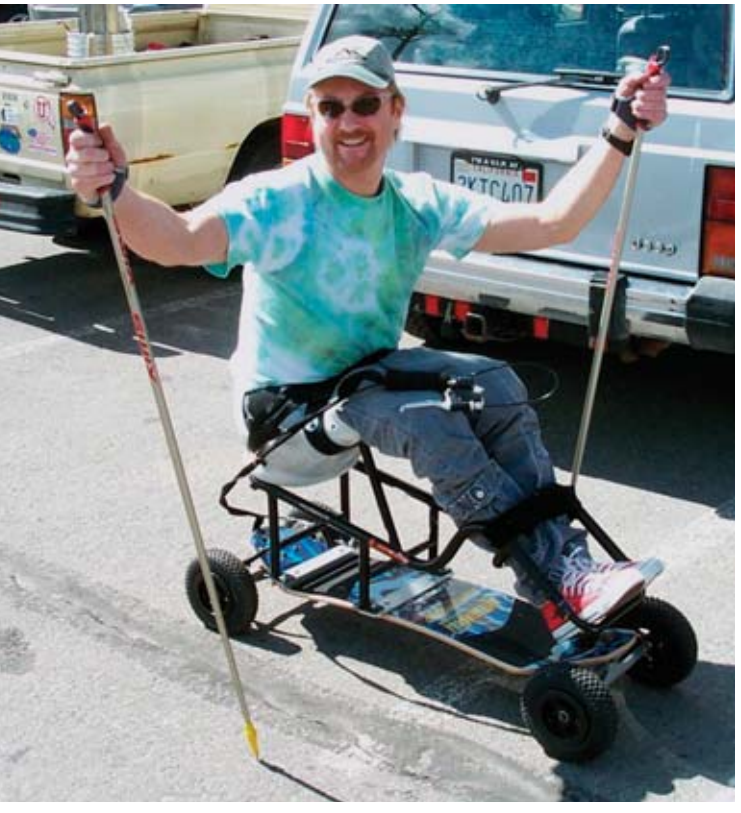
Using a tether, Nick Deffterios and Alva Gardner ski Alpine Meadows in North Lake Tahoe, Calif. People of all abilities can enjoy the ski slopes.



Greg Mallory shows what it takes to maneuver an adaptive Nordic cross-country ski.

product innovation has occurred because of the sport's minimalist nature. Almost universal in its design, sit-down Nordic skis feature a fabric or molded bucket seat on a lightweight frame. Two cross-country skis are mounted parallel to each other, allowing them to fit into the groomed tracks at a cross-country ski resort. Ski poles are strapped to your hands, and a rowing style movement is used to propel the ski. To save weight, there is no brake, and all propulsion, turning, and stopping is done through learned technique. Stopping is accomplished by turning the ski sideways and sliding to a stop or by leaning down and digging the ski-pole handle into the snow. If the technique seems sketchy and if it sounds like the equipment is dated and an improved lightweight design is ready to be created, it's because it is.

Despite its challenges, adaptive Nordic skiing is one of the best exercises for paraplegics and quadriplegics. While pushing a manual wheelchair builds the chest muscles and pushes the shoulders forward, propelling an adaptive cross-country ski uses the exact anterior muscles as pushing a wheelchair. This opens up the chest and strengthens the muscles of the back and the backs of the shoulders, pulling the shoulders back and strengthening the muscles, which actually helps prevent shoulder injury.



When the snow melts, Bob Vogel mounts his Nordic ski frame on a mountain board for year-round fun.

"Adaptive cross-country skiing is a blast; it's absolutely addicting, and you simply won't believe how much fun it is until you try it," says Bob Vogel, a T10 para from Loomis, Calif. "With this very simple piece of equipment and a desire to get your heart pumping, Mother Nature puts a big white accessible ramp into the great outdoors," he says.

Cross-country skiing is also a great family sport, and Vogel, who has a young daughter, attaches a saucer to the back of his ski and pulls her through the woods with his dog as a healthy escape into otherwise inaccessible places.

Rick Mason (Davis, Calif.), a C6 quad, first tried adaptive cross-country skiing in Crested Butte, Colo., 15 years ago. "I thought it was going to be very hard," he says. "But it didn't end up being nearly as hard as I'd imagined. As an avid swimmer and handcyclist, I love the great cardiovascular workout and the ability to enjoy getting into the woods in the winter under my own power.

"As a C6 quad, adapting most sports to my needs generally requires a fair amount of taping things to my hands, but in cross-country skiing, the poles are strapped to your hands anyway, so no further adaptations are generally required. I will sometimes add one small piece of duct tape to further secure the straps to the back of my hands, but other than that I can just get in the equipment and go!"

World champion adaptive Nordic skier Candace Cable (T9, Truckee, Calif.) enjoys introducing her sport to people with dis-

During a cross-country adventure in Lake Tahoe, Calif., Candace Cable takes in all the beautiful winter scenery while getting a good workout.

abilities. Through her organization, Turning Point Tahoe, she has made five adaptive sit skis available at Tahoe Donner Resort in Truckee for anyone with a disability to use—free of charge.

"For me, cross-country skiing is like being able to hike again," she says. "While I'm happily retired from competition, I'm more enthusiastic than ever about expanding awareness and education about this sport to people of all abilities."

Let It Snow

Adaptive Nordic ski frames are simplistic and highly versatile. An adaptive cross-country ski frame is a piece of equipment that can be used for summer and winter adventures. In the winter, cross-country skis and ice blades attach to the frame, making snow and ice an accessible playground. In the summer, the frame can be mounted to a mountain board (which includes a hand brake) to allow for cross-training and an exciting way to get into the woods and back onto the single-track trails where wheelchairs can't always go.

This winter when the snow flies, instead of hiding indoors and wasting time on the couch, take a risk, take a chance. Go outside and try something new. An active body leads to a healthy mind, and winter weather should no longer trigger thoughts of cabin fever. It doesn't matter what your disability is, with the specialized adaptive equipment available today, the beauty, serenity, smells, and excitement of winter can be yours to enjoy. See you outside! **S'NS**

Matt Strugar-Fritsch, 24, is a Michigan State University graduate and lives, works, and plays in Sacramento, Calif.

SPECIAL SECTION:

CONQUERING the Slopes

by Phil DeMeo

After a near-fatal car accident, a young athlete sets her sights on the ski slopes and fulfilling her Paralympic dreams.

Every afternoon, strength and conditioning exercises are followed by a multitude of balance drills. Exercises that pinpoint the back and upper-body muscles come first, followed by push-ups, sit-ups, and medicine-ball repetitions. Next, carefully planned movements on the physio ball strengthen the core and improve stability. Finally, sets of simulated ski movements and training techniques conclude the workout.

Sylvie Fadrhonc, like any other athlete, trains with a purpose, and her mind is set on achieving her goals and fulfilling her aspirations. Yet, her fearlessness and determination set her apart. After surviving a near-fatal car crash that left her paralyzed below the waist and enduring a grueling rehabilitation, the easygoing and friendly Fadrhonc is prepared for any challenge. That is why, on a beautiful, crisp afternoon in Telluride, Colo., after a day of work at her full-time job, she pushes through another workout. With a promising ski career ahead of her and a series of trying obstacles behind her, Fadrhonc is focused on making it to the starting gate in Vancouver, the site of the 2010 Paralympic Winter Games.

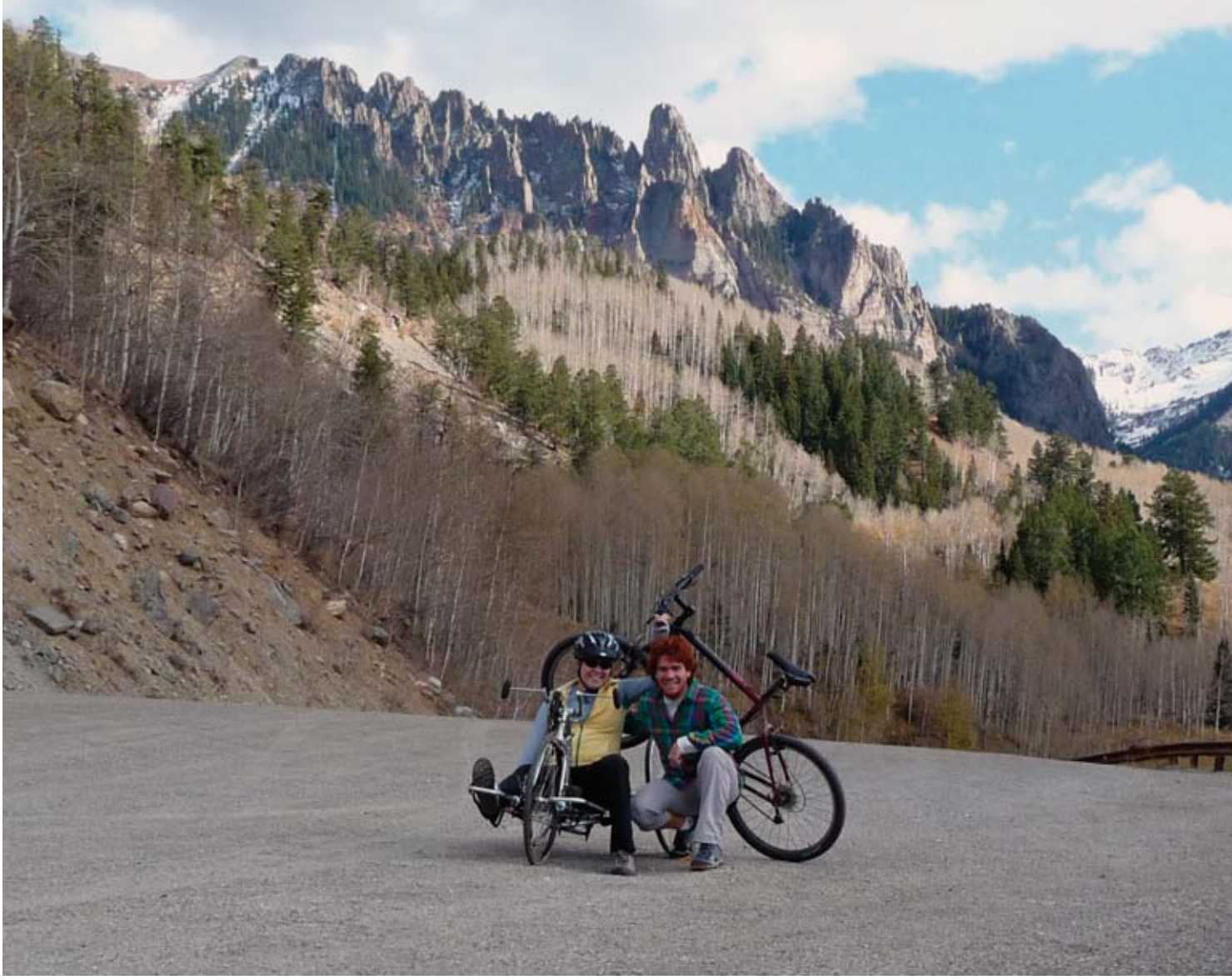
Sylvie Fadrhonc and her dog Raglan enjoy a beautiful day exploring the wilds of Telluride, Colo.

High Achiever

In spring 2007, Fadrhonc graduated from Colorado College (Colorado Springs), where she majored in geology and was pre-med also. A student trainer and a member of the tennis team, Fadrhonc was always active and a well-known part of the college community. Shortly after graduating, she moved to Telluride, Colo., to continue her active lifestyle as a rock-climbing and hiking guide. In the early hours of the morning of September 13, 2007, Fadrhonc was driving from Colorado Springs to Telluride to make it in time for the start of her shift at her second job at a local outdoor store. Around 7:30 a.m., she fell asleep at the wheel.

"I did the whole head-nod thing," Fadrhonc recalls.

Before she could react, her vehicle rolled down an embankment and came to rest nearly 50 yards off the side of the road. Conscious but bleeding profusely from a gash on the top of her head, Fadrhonc leaned on the horn—her only



Sylvie Fadrhonc hopes to compete at the 2010 Winter Paralympic Games in Vancouver as a member of the U.S. Paralympic Alpine Team.

chance for survival. Luckily, just 15 minutes passed before a cyclist heard the horn, flagged down cars with cell phones, and called emergency crews. After being pulled from the wreckage, Fadrhonc was airlifted to St. Mary's Hospital in Grand Junction where she underwent surgery for 8½ hours to repair a fractured L1 vertebra and a partially torn spinal cord. Following the surgery, doctors told Fadrhonc's parents there was less than a 10% chance she would walk again.

Shortly thereafter, Fadrhonc began her rehabilitation at Craig Hospital (Englewood, Colo.). Although her time at Craig was exhausting, it was extremely rewarding. She was surrounded by others similar in age and injury, and the facility allowed her to feel comfortable despite her struggles.

"There was a pack of four of us," Fadrhonc says. "There was a lot of working together, and we were able to push and pace each other."

Each weekday for more than two months Fadrhonc endured a regimen that consistently tested her will. Each time she was challenged, she overcame the adversity with striking resiliency.

Monday through Friday, Fadrhonc began her day with one hour of strength and conditioning in the weight room, where she focused on explosive power and agility exercises. The next hour was dedicated to a mat class, where she worked on balance and transfer skills. Then, to finish her day, Fadrhonc worked through a physical-therapy session in the pool, the occasional bike ride, a wheelchair class devoted to endurance and everyday skills, acupuncture, and sometimes a massage. The six-hour routine, in addition to all the blood tests, CT scans, and MRIs, added up to a long day.

"It was really tough, but it taught us drive and work ethic," Fadrhonc says. "We figured out how to get going again and be independent."

Competitive Edge

The difficult rehabilitation paid off. Upon entering the hospital, Fadrhonc had trouble sitting up and balancing on her own. A few months later, she was performing stability exercises on a physio ball. Not only was she much stronger, but Fadrhonc could function on her own and set goals without compromise.

After leaving the hospital the day before Thanksgiving 2007, Fadrhonc continued to test her limits. In early January, just four months removed from her accident and against the wishes of her doctors, she joined her brothers for some fun on the ski slopes. The entire day, spent darting down the mountain time after time, was confirmation for Fadrhonc that her athletic abilities had not left her.

As winter turned to spring, Fadrhonc remained active in her athletic endeavors and within her community. In May 2008, she and a friend established The Overcome Foundation, a nonprofit organiza-

Name Change

One of the longest-standing teams in the Paralympics is changing its name to better reflect the high level of athleticism of its members. Formerly known as the U.S. Disabled Ski Team, the new U.S. Adaptive Ski Team includes alpine and cross-country skiing in a program managed under the U.S. Ski and Snowboard Association (USSA), the parent organization of the U.S. Ski Team.

"The athletes of the U.S. Adaptive Ski Team are anything but disabled," said USSA President and CEO Bill Marolt. "These are some of the most physically fit and technically skilled athletes in the world. They have adapted themselves to their physical situation and have become true world-class athletes. The new name represents a much more accurate depiction of what they have accomplished."

The program has a long history, dating back to 1986 when the USSA first named what was then the U.S. Disabled Ski Team. The Team was showcased at a demonstration event at the 1988 Olympics in Calgary, then went on to become one of the leaders in the Paralympics and began its medal competition in 1992 in Albertville, France.

Similar to its able-bodied counterparts, the U.S. Adaptive Ski Team competes every year in a season-long World Cup circuit for alpine and cross country, which is organized under the International Paralympic Committee (IPC). The sport is also recognized by the International Ski Federation (FIS). Alpine and cross country will have World Championships in the 2008–09 season, as well as competition at the Paralympics in Vancouver in 2010.

The U.S. Adaptive Alpine Ski Team opened its season December 5–7 at The Hartford Ski Spectacular with races in Copper Mountain, Colo. The cross-country team's season began with the ConocoPhillips U.S. Cross Country Ski Championships in Anchorage in early January.

Contact: www.ussa.org.

tion promoting active, healthy lifestyles for women with spinal-cord injuries.

Later that month, Fadrhonc entered the Denver-area Colfax Marathon, participating on a team from Craig Hospital. During her portion of the race, a 5km leg, her competitive edge emerged.

"My two friends knew it was my first race, and said, 'Don't worry, Sylvie, we'll hang back with you so you can keep pace,' and that really motivated me to keep up," she recalls. "So I did my best, and I finished strong."

After she crossed the finish line with her opposition far behind, Fadrhonc's competitiveness resurfaced when she met some friends who were traveling to Beijing to participate in the 2008 Paralympic Games. She was intrigued—and envious.

I want to do that, Fadrhonc thought. "So I came up with a plan that might get me to the Paralympics one day," she says.

Just like that, Fadrhonc had a new goal: to make it to Vancouver. Now she just needed a sport that would allow her to accomplish her latest objective.

Not Such a Long Shot

Admittedly, Fadrhonc had a difficult time returning to the sports in which she competed prior to her injury. Devoting her time to wheelchair tennis or sled hockey was much more mentally frustrating. Growing up, she had skied recreationally but never on an advanced level. With the next Paralympic Winter Games less than two years away, Fadrhonc decided to pursue her dream through skiing. Although she considered herself a long shot to make the U.S. Disabled Ski Team (see sidebar, "Name Change"), Fadrhonc knew she had the discipline and determination to give it a shot.

After months of training, Fadrhonc still has modest expectations, believing her chances of making it to Vancouver are minimal.

"I'm still the new guy on the block," Fadrhonc jokes. "I'm not an elite athlete yet."

Others are not as quick to dismiss her chances. From many perspectives, Fadrhonc's resolve is something that should not be overlooked.

"From what I have seen, Sylvie is very motivated," notes Challenge Aspen Director of Skiing Kevin Jardine. "And she obviously is a highly athletic person."

Stacey Wooley, associate director of Winter Programs, U.S. Paralympics, agrees: "We love supporting enthusiastic athletes like Sylvie. Her determination to get to the starting gate in Vancouver is truly an inspiration to winter sport."

Following her first race in December 2008 at the Ski Spectacular in Colorado, Fadrhonc expected her workload to increase. She will train through April, when she will have an opportunity to ski alongside some of the most decorated U.S. Paralympians at the 2009 U.S. Disabled Ski Championships in Winter Park, Colo.

"I'm taking it very slowly," says Fadrhonc. "I'm looking forward to just being at the same races as some of the great skiers."

Until then, Fadrhonc takes it one day at a time. Just over a year removed from her injury, she trains with hopes of making it to the top of Vancouver's pristine snow-covered slopes, ready to launch herself downhill and beyond yet another obstacle. Although it is a lofty goal, she is simply excited to be out on the snow doing something she loves.

"I just want to get back into competitive sports and be recognized as an athlete just as much as the next guy," Fadrhonc says. "It's really just for love of the sport."

Contact: U.S. Paralympics, www.uspara lympics.org. **S'NS**

Phil DeMeo is an intern with the U.S. Paralympic Division of the United States Olympic Committee (USOC).