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OUTDOORS

WEEKEND



Photos by SCOTT STOWELL • Special to the Star Tribune
A specially designed paddle by a former environmental education teacher has allowed Scott Bush to do what he has long sought: A trip into the Boundary Waters Canoe Area Wilderness with his sons. The paddle features a shoulder harness, shown below, on which the paddle action pivots.

NO LIMITS

Refashioned paddle transforms a family wilderness experience in northern Minnesota.

By SCOTT STOWELL • Special to the Star Tribune

ELY, MINN. – When he was 7, Scott Bush fell out the passenger door of a moving car and its rear tire ran over his hand. Surgeons attempted to reattach the hand, but to no avail. It was amputated 11 days later. He has lived without it for 35 years.

Bush, of Norwalk, Iowa, didn't let the injury stop him. He played four sports in high school and, what's more, was the founder of Templeton Rye Whiskey. However, he said he hasn't canoed much because having one hand made paddling awkward.

He's had a desire to visit the Boundary Waters Canoe Area Wilderness. He recently booked a guided trip with the Ely Outfitting Co. to take his sons Adrian, 12, and Xavier, 10. As part of the package, the company bought a specially designed paddle to considerably enhance Bush's paddling skills.

"If it turns out that this thing works well, I think it'll be something I want to do a lot more," he said before the trip.

Providing outdoor experiences to disabled people has been the lifework of Cindy Dillenschneider of Washburn, Wis. She was an outdoor education professor at Northland College from 1989 to 2016 in nearby Ashland. Experience showed her that paddle sports are some of the most accessible mediums for people with lower limb impairments. However, people with upper limb impairments don't have that same advantage. She was determined to find a solution.

In 2005, she began prototyping a specialized paddle. After extensive research and a variety of evolutions, Dillenschneider patented a paddle that harnesses to the shoulder of a user's lifejacket. Paddlers then use their good hand and arm for the paddle stroke, with their torso muscles generating power. The paddle is lightweight and adjustable for body size and blade pitch. Its shaft is constructed of carbon fiber with a fiberglass insert. The blade, made of a plastic composite, runs to an elbow joint that bends the upper shaft toward the user's shoulder

See **PADDLE** on OW2 ►



LEARN MORE For more details about the paddle, e-mail Cindy Dillenschneider at DillenschneiderDesigns@outlook.com.



Called to a Minnesota trail

Riding on the Paul Bunyan State Trail on a summer's day was a fun immersion into north-central Minnesota. **Page OW4**

New model may better predict spread of CWD, other diseases

Model shows the areas of fastest growth and could help manage outbreaks in Minnesota.

By TODD NELSON
Special to the Star Tribune

A new, more accurate way to forecast the growth and expansion of chronic wasting disease (CWD) in whitetail deer also could help predict the spread of invasive species such as zebra mussels or the Ebola and Zika viruses, according to researchers.

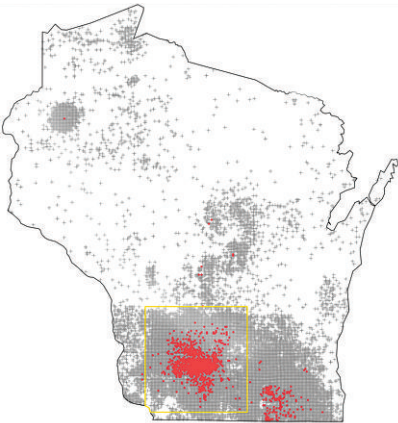
The forecasting tool presents the probability of CWD infection in a heat map-like format, with darker "hot spots" showing where the disease is growing at a faster rate in a study area in southern Wisconsin, said Daniel Walsh, a U.S.

Geological Survey scientist based in Madison, Wis., and an author of a paper describing the newly developed method.

In Minnesota, this type of modeling will be more valuable as the state collects more data, said Chris Jennelle, a research biologist with the Minnesota Department of Natural Resources. That may result from a special January 2018 hunt that the DNR has proposed in three southeastern deer permit areas and a special zone established last year after CWD was discovered in wild deer near Preston and Harmony, Minn.

In the forecast map, darker areas, which could indicate sources of disease, contrast with lighter "cool spots" where the disease is less likely to spread and where it then may die out, Walsh said. The heat map-style graphical representation

See **MODELING** on OW2 ►



JOHN WILEY & SONS

Clearer picture
Red dots show the location of nearly 2,600 whitetail deer that tested positive for chronic wasting disease from 2002-2014 in Wisconsin. U.S. Geological Survey researchers focusing on the highlighted area used the data to develop a new mathematical model to predict spread of CWD. One take-away: CWD was more likely to spread inside the Wisconsin River corridor.