

Rockfall

California, High Desert, Apple Valley Area, Alessandria

On Saturday, March 6, Tylea Brown (39) and her husband, Casey Cruz (32), accompanied by their two young daughters, were enjoying climbing in the Southern California high desert. After completing several single-pitch routes, Brown was belaying Cruz on top-rope. As Cruz climbed, he noticed small, spontaneous rockfall to the side of the route. He peered above, over a ledge, and saw a rock about the size of two microwave ovens begin to fall. His right hand was in a crack as he shouted "ROCK!" Cruz then attempted to shift the rock's course with his left hand, but it was too heavy. He did manage to push away a smaller rock that followed.

On the ground, Brown shifted her body in an attempt to shield her daughters and avoid the fallin boulder. Despite this, the rock crashed onto Brown, crushing her left leg. Brown was belaying with an Edelrid Jul 2—a single-rope belay device with some assisted-braking capability. This helped keep Cruz safe as he witnessed the collision and severe injury. As Cruz quickly rigged his rappel, Brown pulled her nearly detached foot out from under the boulder and held it above her head. Her shoe remained under the rock. Cruz arrived at Brown's side and tied a tourniquet above her ankle and stabilized her foot with an ACE bandage.

Concerned about the possibility of bleeding out, Brown hopped and then scooted down the steep quarter-mile trail to their truck, with Cruz's assistance. They then drove to meet the incoming ambulance. First responders continued to stabilize Brown until a helicopter arrived to airlift her to Loma Linda trauma center.

The next day, Cruz returned to the scene and cleared other loose rocks from the route. He later learned that three small earthquakes had struck the area on the day of the accident. These seismic events might have shifted the rocks.

Brown has required multiple surgeries, including a below-the-knee amoutation. As she continues the long path of healing, she has been fitted with a prosthetic, allowing a return to a number of outdoor sports. She hopes to climb again in the future.

ANALYSIS

Rockfall is a risk in all types of climbing. Cruz and Brown did many things that contributed to lessening injury to both of them. Cruz's awareness of his surroundings and prompt verbal warning gave Brown just enough time to partially protect herself and her children. The use of an assistedbraking device kept Cruz safe while on belay. Having the right equipment on his harness allowed Cruz to self-rescue and rappel. Their medical equipment and first-aid knowledge helped stabilize Brown's injuries. Finally, the team maintained a sense of composure and demonstrated phenomenal grit on the descent to their truck. This shortened the interval between accident and definitive care.

(Sources: Tylea Brown and the Editors.)

Images



Tylea Brown and the boulder that claimed her leg.

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