

The Chinook

Strong winds frequently occur along the front range of the Rocky Mountains in Colorado during winter storms. They sweep eastward down from the 14,000-foot high mountains near the continental divide to the plains 10,000 feet lower. Winds up to 70 miles per hour blow through Fort Collins, Boulder, and Denver, sometimes blowing down trees and damaging buildings. The wind is known as, *The Chinook*, a name probably coined by the Arapahoe Indians. It means, *Snow Eater*.

The air is heated by 20 degrees or more as is forced down the mountain during a storm crossing the Rockies. The warm air and strong winds may cause much of the snow blanketing the ground to rapidly melt and evaporate. During a single day as much as 6 inches of snow can be lost in these strong, warm winds.

While I was attending graduate school at Colorado State University in Fort Collins, about 75 miles north of Denver, I conducted an experiment with the wind one day with my bicycle. I frequently rode my bicycle to work to the atmospheric science department about 7 miles from my home. In the mornings the winds weren't usually very strong on the way to class, but coming home in the afternoon, the winds would typically pick up. If there was a chinook that day, the wind would blow from behind me and I could get home very quickly.

One Saturday I decided I wanted to see how fast I could go on my bicycle in a Chinook. I rigged my bicycle with a sail made from two 4-foot wooden dowels, 3/4 inch in diameter. I mounted one vertically on the fork of the bike and the other horizontally above the handlebars.

The two dowels were fastened together at the center of the handlebars and could turn to form a mast and boom, like the sail on a sailboat. I fastened a triangular piece of material to the two dowels which gave me a sail of about 5 square feet in area. The top of the sail extended 18 inches above my head when seated on the bike. By leaning sideways into the wind, I could grasp the boom with my hand and control how much wind would push against the sail and propel my bicycle forward.

My plan was to ride the bike eastward on a paved east-west county road so that the wind was coming from my left rear. The wind was typically from the west or northwest during a chinook. On a Saturday one spring when the temperature was relatively pleasant I decided to conduct my experiment. I road my bike to the south end of town and headed eastward on Harmony Road toward Greeley, Colorado.

After I traveled about a mile eastward away from houses and trees the wind got stronger. It was coming from the northwest, so I held the boom with my right hand. With my left I held the handlebar of the bicycle. The wind was blowing so hard that I had to lean to the left to keep the bicycle from being blown over. But when I leaned left the bicycle wanted to turn left. I needed to maintain a straight line down the road or I would veer into traffic or into the ditch on the side of the road. So, I had to learn how to counterbalance the force of the wind by leaning left, moving the boom sideways to keep the sail nearly perpendicular to the wind, and steer the bicycle in a straight line down the road.

The wind was averaging about 40 miles per hour but was gusting between about 30 and 50 and backing and veering slightly. Every time the wind would slow I had to lean less to the left, move the boom counterclockwise, and turn the handlebars to the right to keep everything balanced and moving in the right direction. When the wind blew faster I had to move everything in the opposite directions.

The continuous gustiness caused a very unsteady ride, weaving from side to side, and after several miles it became very tiring. I was traveling about 60 miles per hour because of the angle to the wind. This speed on my narrow-tired, 3-speed bike was daunting and very precarious because I was only holding one handlebar. The fear of falling and experiencing massive road rash became progressively more terrifying as I flew across the prairie.

I kept going for 10 miles out into eastern Colorado before I finally got out of the strongest wind and was able to pull over and stop at a gas station. I called home on a pay phone at the gas station to have my wife come get me. There was no way I was going to be able to ride my bike back home 10 miles uphill and against the wind. I was fortunate to have even found a phone in the desolate ranch country

between Ft. Collins and Greeley. I hadn't even considered beforehand how I would get home.

Sailing a bicycle was one of the most exhilarating experiences I've ever had. Pitchpoling a catamaran in the middle of Lake Tahoe may have been the only other near-death event I've had that topped it. But, keeping my balance while sailing 60 miles per hour down a blacktop road on a bicycle was much more dangerous than I had anticipated. I never tried it again -- it was just too frightening.