

CHIPPED AND COMPACTED

Cornwall Park in Bellingham, Washington, is a popular place to play disc golf, but the sport may be causing unintentional damage to the natural landscape.

The Planet Magazine | Mar 10, 2016 | Story by: Sam Chanen | Photos by: Simon Bakke



A disc golfer aims to get his disc into a chain-link basket in the fewest possible number of throws from a starting platform. Damaged trees are more likely to succumb to disease or pests.

The 9-hole disc golf course at Cornwall Park in Bellingham, Washington, is surrounded by towering Douglas-firs and western red cedar trees. It's before noon on a cold Tuesday and a man in a green plaid shirt and jeans is already playing disc golf. He throws a Frisbee-like disc toward the basket and eventually makes a shot.

While the course brings many visitors to Cornwall Park, it also attracts disc golfers who put the health of the soil and trees at risk. Disc golf is the Frisbee version of regular golf, and its rules are similar. As its popularity grows park managers and enthusiasts must decide if disc golf can be played without scarring the natural landscape.

As the City of Bellingham Parks and Recreation Department Grounds Supervisor Steve Nordeen placed his hand on a Douglas-fir, he quickly identified how one side of the tree's bark had been chipped and discolored, while the other side appeared to be unharmed.

If a tree is physically damaged, then it becomes more susceptible to disease, Nordeen said. Because of disc golf damage, up to 10 trees have been removed from Cornwall Park.

Disc golf is one of the fastest growing sports in the world. Three thousand disc golf courses exist in the United States and 100 new courses are established each year, according to a 2014 study by researchers at the University of North Carolina, Asheville.

Players use different types of discs such as sharp-edged drivers, round-edged mid-ranges, and short-distance putters, said Chloe Salkield, who has been playing disc golf for the past eight years. The discs hitting the trees can reach speeds of over 80 kilometers per hour, according to a 2015 study by researchers at Kansas State University.

Compared to Frisbees, the discs fly further and faster. However, their weight is similar to a Frisbee, weighing between 120 and 180 grams. In addition to potentially harming the trees, the soil compaction from foot traffic at Cornwall Park resulted in the soil becoming cement-like.

When the soil is compacted and hard, it makes it difficult for new plants, such as native shrubs, to grow underneath the trees, Nordeen said. The soil compaction can restrict root growth and lead to disease from limited drainage, according to a 2005 report from the Tree Associates Professional Consulting Arborists.

Soil compaction prevents the roots from accessing oxygen and water, causing the roots to die and trees to possibly fall over, said Brandon Brodie, certified arborist and owner of Earthworks Tree Service in Bellingham, Washington.

Brodie, a disc golf player himself, mentioned how underneath the bark is the most important part of the tree, because that's where the bark cells and new wood cells are being produced.

"Once the bark gets penetrated then you're going to start seeing rot," Brodie said.

The trees are getting hit hard and while no exposed bark has been seen yet, it's close, Brodie said.

"Even though I love disc golfing [at Cornwall Park] and I love the sport, it's definitely at the sacrifice of the trees," Brodie said. "They can handle a lot of abuse, but I think more care could be taken."

To protect the trees, the parks department will be attaching a rubber mesh-type material to the trees in play, Nordeen said.



Steve Nordeen, Bellingham Parks and Recreation Department Grounds Supervisor brushes aside some compacted soil near one of the disc golf holes, which can prevent tree roots from getting air and water.

Compared to traditional golf, disc golf doesn't require trees to be cut down to design the course or a chemically treated green, according to a 2011 study in the International Journal of Sport Management, Recreation and Tourism.

"You don't have to cut anything down, the course is a natural layout through the trees," said Colin Morris, an industrial maintenance mechanic and disc golfer. "It's the easiest sport to set up and play because you use the trees as natural fairways."

Morris played his first game of disc golf at Cornwall Park back in 2003. He went on to become a professional disc golf player and is the current steward of the course at Cornwall Park.

Morris' face lights up with excitement when he talks about the growth of the sport.

"It's crazy," Morris said.

In the past three to four years, the popularity of disc golf has grown at Cornwall Park. When he started playing, there were a few regulars, but now there are families, couples, kids and large groups going out and playing, Morris said.

To help relieve the pressure from the increased use, Morris got approval for a disc golf course at Van Wyck Park in Bellingham, and is waiting for a parking lot to be built for the course.

"Alleviating the pressure would be getting a new course," Morris said. The parks department attempted to address soil compaction at Cornwall Park by delivering woodchip mulch throughout the year. Disc golfers have been working with the department to spread mulch piles, Nordeen said.

The woodchip mulch helps protect the soil from further compaction, said Andy Bach, an associate professor of geography at Western Washington University and an avid disc golfer.

Applying mulch increases the level of organic matter in soil areas that have been affected by foot traffic and lack of vegetation growth, according to a 2011 study in the International Journal of Sport Management, Recreation and Tourism.

As organic material such as woodchips decay it's going to turn into the organic materials that would normally be going into the soil, Bach said.

Both tree health and soil compaction are equally important, because you need one to keep the other one healthy, Nordeen said. Some people would say Cornwall Park is a good place to play disc golf and others would say it's not, Nordeen said.

As the man in the green plaid shirt throws his disc at the chained basket, the sound of the disc rattling the chains can be heard from quite a distance and accompanies the booming sound of Squalicum Creek's flowing water. Arborists, disc golf players and volunteers will continue working together to accommodate outdoor recreation and limit disc golf damage at Cornwall Park.