DANNY
THE ARBORICULTURE SCIENTIST
TESTING THE LIMITS
OK, ANGELLA. LET IT ROLL!
HERE IT COMES.
HERE IT COMES.
HERE IT COMES.
CRACKA!

LOOK OUT BELOW!
LONG BEFORE I STARTED CREATING MY OWN ICESTORMS, I WAS QUITE FAMILIAR WITH THE DAMAGE ICE CAN DO TO A TREE.
20 YEARS EARLIER...

WHOA.
I've always been fascinated by trees.
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But it wasn't until a few years into college that I decided to study forestry.
A friend told me that urban forestry would allow me to take care of trees in people's yards, on streets, and in parks.

That sounded good to me.
Following school, I worked in tree care, getting paid to climb trees and swing from ropes!
...but my career path was far from straight.
Looking for higher pay and perhaps a more stable career, I shifted gears and got a job in advertising.
But after awhile, I realized it wasn't for me.
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I missed working with trees... so I went back to tree care.
I remember attending a pruning workshop after I’d gotten back to working with trees. People had tons of questions for the instructor.

Why do we make the cut there?

How do we know?

Why do we leave this branch and not that one?
This is what we think based on the science we have, but we don't know for sure. There's just no research on it.
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That stuck in my mind.
Sometimes, my company got called when trees were damaged in storms. By then, it was often too late to help.
HOW CAN WE PREVENT THIS KIND OF DAMAGE TO TREES
Maybe I could do research to help people who work with trees do their jobs better.
SO I WENT TO GRAD SCHOOL TO RESEARCH HOW TO BETTER CARE FOR TREES.
Today, I have several research projects going. For this study, I'm measuring how much ice a branch can hold before it breaks.
I spray water onto tree branches during the winter.
As it freezes and ice builds up, we measure the sagging branch's angle as it changes over time.

26 degrees. This one's really holding on!
IF THE BRANCH DOESN'T BREAK, WE SYSTEMATICALLY CUT IT UP,
...measure the ice thickness, and calculate the ice’s weight.
BASICALLY, WE GATHER ALL THE DATA WE POSSIBLY CAN.

TWENTY-TWO MILLIMETERS THICK.
But why did this branch snap while another hung there for hours?

What about them is different?
Maybe our data can help us prune trees in a way that enables them to survive ice storms.

But this work also leads to a lot of future questions...
IF WE HAD LEFT THIS BRANCH ON, WOULD IT HAVE RETURNED TO ITS ORIGINAL POSITION?

WOULD IT BE MORE LIKELY TO BREAK IN A FUTURE STORM?

WOULD THE MENDED BRANCH BE STRONGER OR WEAKER THAN IT WAS BEFORE?
I told you it would fall.

Let's get this one back to the lab.

There's a lot more work to do.