ANCIENT SEEDS YIELD LIFE, GIVE HOPE: OP-ED

'Life will find a way.'

This is one of the corniest lines in "Jurassic Park," and also one of the most hopeful.

Perhaps dwelling on this upbeat thought will help us overcome the fact that children are being swept into super tornadoes, U.S. soldiers are being murdered by their Afghan allies, 20-somethings are boomeranging into basements and the political season drones on with empty rhetoric.

To keep this hope going, I offer you this ridiculously happy story of life from near-certain death that's actually true.

The seeds of life can still blossom into beauty, even after 30,000 years. Call it a miracle if you like. I call it a compelling case study in support of basic scientific research of the sort that will help us get through the future. Call it a piece of old news fluff, and I'll respond by saying that it symbolizes what the first spring flowers do each year.

The facts are these. About 32,000 years ago in the Siberian middle of nowhere, a ground squirrel was busy doing its thing. This was to make an underground home by burrowing down into dark dusty soil, and then stocking that home chamber with foodstuffs gleaned from the sunlit land. In this particular case, the seeds from a humble but lovely wildflower known as a campion (Silene stenophylla) were brought down for storage to a level just above the permafrost table. This is like putting something near that cold spot in the back of the refrigerator and forgetting it. For reasons we'll never know, the seed never got eaten, perhaps because the creature that put it there got eaten instead. The web of life and all that.

Before the seeds decomposed, the burrow became filled with sediment and the permafrost table rose upward above it. Thus the seeds became locked into a frozen mass that was later buried to depth of 116 feet -- thereby receiving very little destructive radiation -- and remained at minus 7 degrees Celsius for nearly 32,000 years. Finally, it was thawed, collected and studied by Russian scientists Svetlana Yashina, Stanislav Gubin, Stanislav Maksimovich, Alexandra Yashina, Edith Gakhova and David Gilichinsky.

During this same interval an ice sheet invaded Connecticut from Canada, crushed stone into fertile soil, built the sandy moraine archipelago from Staten Island to Nantucket, retreated back to Baffin Island and left as a legacy a warmer landscape on which humans could thrive and be thankful.

Being curious, the Russian scientists attempted to grow the seeds in the lab. No luck. Being determined, they isolated plant placental tissue, used in vitro clonal micro-propagation and succeeded. Green shoots passed through the same developmental stages as modern plants. They flowered and set viable seeds that have since sprouted into succeeding generations distinct from those of the same species found in the area today. This makes them the "most ancient, viable, multicellular, living organisms" known on planet earth today. The previous record is 15 times less old: a desiccated date palm found in the remains of Masada, a military fortress in Israel.

This work is yet to be independently verified. At this stage, it's only one report written by one team of Russians that survived one critical peer review before being published in Proceedings of the National Academy of Science of the United States of America. Time will tell if the Russian work becomes widely accepted. But for now, it sounds like one for the record books.
Plant scientists are brimming with excitement. By comparing traits from ancient and modern members of the same species -- genes, morphology, physiology and growth -- scientists will be able to study the details of plant evolution over a much longer time span than before.

The good news for the rest of us is symbolic. Patience pays off. Though taken for food and buried in the dark, these plants survived whereas the seemingly luckier ones did not. Good things do come to those who wait.