

# Ice age plant brought back to life - mammals next?

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This undated photo provided by the Institute of Cell Biophysics of the Russian Academy of Sciences show a *Sylene stenophylla* plant regenerated from tissue of fossil fruit. (AP Photo/HO, the Institute of Cell Biophysics of the Russian Academy of Sciences)

It was an Ice Age squirrel's treasure chamber, a burrow containing fruit and seeds that had been stuck in the Siberian permafrost for over 30,000 years. From the fruit tissues, a team of Russian scientists managed to resurrect an entire plant in a pioneering experiment that paves the way for the revival of other species.

The *Silene stenophylla* is the oldest plant to be regenerated, the researchers said, and it is fertile, producing white flowers and viable seeds.

The experiment proves that permafrost serves as a natural depository for ancient life forms, said the Russian researchers, who published their findings in today's issue of Proceedings of the National Academy of Sciences of the United States.

Canadian researchers had earlier regenerated some significantly younger plants from seeds found in burrows.

Svetlana Yashina of the Institute of Cell Biophysics of the Russian Academy Of Sciences, who led the regeneration effort, said the revived plant looked very similar to its modern version, which still grows in the same area in northeastern Siberia.

The Russian research team recovered the fruit after investigating dozens of fossil burrows hidden in ice deposits on the right bank of the lower Kolyma River in northeastern Siberia, the sediments dating back 30,000-32,000 years.

The sediments were firmly cemented together and often totally filled with ice, making any water infiltration impossible - creating a natural freezing chamber fully isolated from the surface.

"The squirrels dug the frozen ground to build their burrows, which are about the size of a soccer ball, putting in hay first and then animal fur for a perfect storage chamber," said Stanislav Gubin, one of the authors of the study, who spent years rummaging through the area for squirrel burrows. "It's a natural cryobank."

The burrows were located 125 feet below the present surface in layers containing bones of large mammals, such as mammoth, woolly rhinoceros, bison, horse and deer.

Gubin said the study has demonstrated that tissue can survive ice conservation for tens of thousands of years, opening the way to the possible resurrection of Ice Age mammals.

"If we are lucky, we can find some frozen squirrel tissue," Gubin said. "And this path could lead us all the way to mammoth."

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