

DE-EXTINCTION AND REWILDING

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Teaching Controversial Issues Workshop

Let's start with a news headline:

**Dolly the Sheep cloner
considers re-creating the
woolly mammoth**

From [CNET News](#), July 31, 2013

Can We vs. Should We?

- ([Animation](#) to explain cloning)

Can We vs. Should We?

- The Science Behind De-Extinction (AMNH)
- <http://www.amnh.org/explore/amnh.tv/%28watch%29/our-research/the-science-behind-de-extinction>

April 1999 Edition

- *Could this be the first step in a bizarre quest led by Japanese biologists to inseminate an Asian elephant with woolly mammoth sperm and selectively breed a fabled prehistoric creature that became extinct thousands of years ago? “I know it sounds unbelievable,” says Kazufumi Goto, “**but no science can deny our idea.**”*



De-Extinction

Bringing Extinct Species Back to Life



<http://www.nationalgeographic.com/deextinction/>

CELEBRATING 125 YEARS OF EXPLORATION

NGM.COM APRIL 2013

NATIONAL GEOGRAPHIC

REVIVING *We Can, But Should We?* EXTINCT SPECIES



Hunting for Mammoth Tusks 44 • Delaware's Historic Valley 68
Florida Is Mad About Manatees 82 • The Wild Men of Europe 98 • Peru's Precious Mahogany 110

April 2013

TED^x DeExtinction

x = independently organized TED event

Friday, **MARCH 15, 2013** • Washington, D.C.

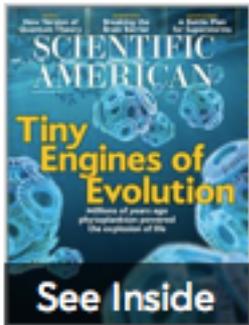
Grosvenor Auditorium • National Geographic headquarters



Cuban Red Macaw
Extinct: late 19th century

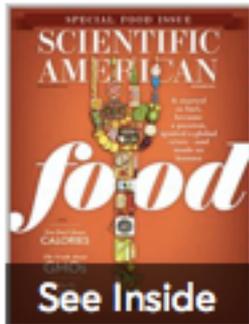
<http://tedxdeextinction.org/>

From *Scientific American*



Why Efforts to Bring Extinct Species Back from the Dead Miss the Point

A project to revive long-gone species is a sideshow to the real extinction crisis



George Church: De-Extinction Is a Good Idea

Reviving mammoths and other extinct creatures is a good idea

By George Church

Pleistocene Park

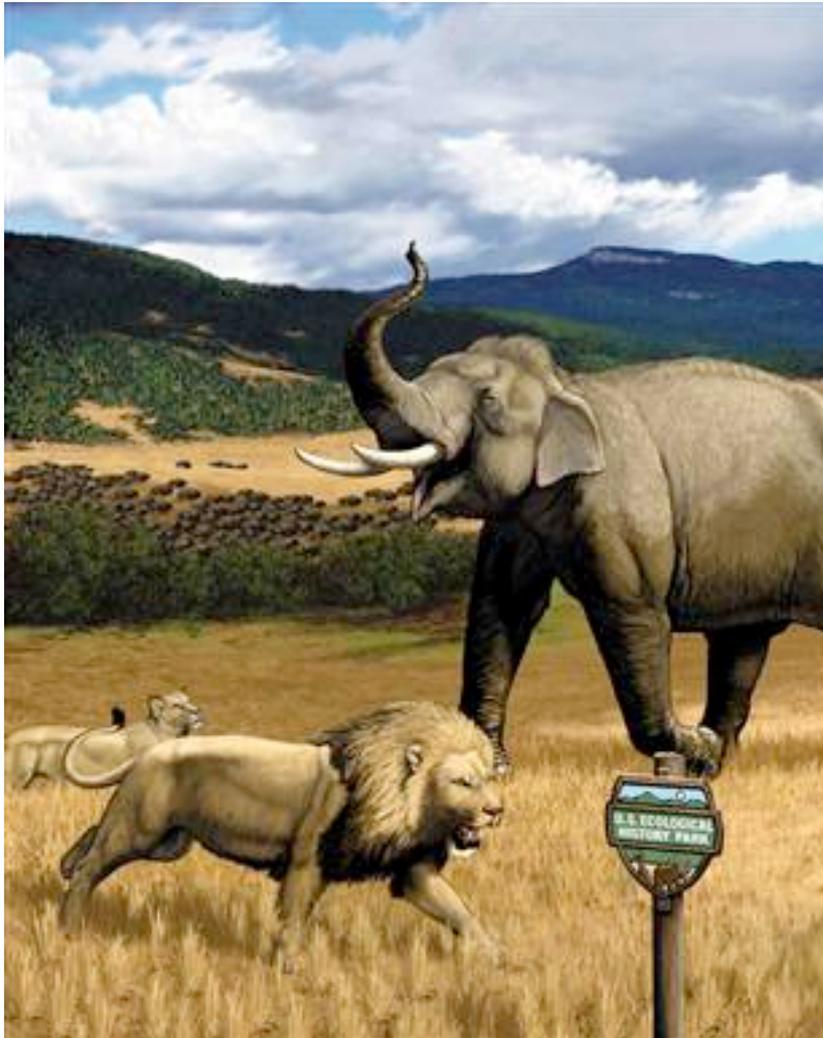


megafaunamystery.blogspot.com/2011/12/pleistocene-park.html



<http://www.sciencedaily.com/releases/2010/09/100907081643.htm>

U.S. Ecological History Park



'Pleistocene' park

A proposal is being floated to re-introduce big-game animals into the Great Plains Region similar to those animals that existed 13,000 years ago, such as large lions, camels and elephants



Classroom Uses

Who should have a seat at the table
for a de-extinction discussion?



Who should have a seat at the table for a de-extinction discussion?

- Paleontologists
- Geneticists
- Veterinarians
- Investors
- Ethicists
- Civilians

Which courses?

- Historical geology
- Paleontology
- Science ethics
- First Year Seminar
- Science controversies
- Biotechnology
- Anthropology
- Evolutionary biology

How?

- Case study
- Role playing
- Jigsaw activity with articles
- Gallery walk
- ... and, there is always the “sage on the stage” lecture
 - ▣ Maybe with a Lecture tutorial
- Skill development:
 - ▣ Research and writing
 - ▣ Public speaking and argumentation
 - ▣ Working in groups
 - ▣ Information literacy
 - ▣ Science literacy

Don't be afraid to ask the hard questions!

- Do you think that it is a good use of time and money to bring extinct species back to life, or should the resources be spent on species that are currently endangered? Explain.
- Are there some species that you think deserve to be brought back and others that do not? Why or why not?
- In your opinion, is de-extinction messing with natural selection, and if so, how could this impact current species?