



A technician touches his drill to a piece of fossilized Neanderthal bone as part of the Neanderthal genome project at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany.

stitched-together genome (since no intact ones exist) would likely be full of errors, and to make it, scientists would have to take several samples, destroying rare bones in the process. One method of cloning—nuclear transfer—tends to produce many sickly organisms that often die. Perfecting the process would “require a horrifying period of trial and error,” Zorich explains. Another method—using stem cells—has so far only been tested in mice.

Even if scientists are one day able to clone a Neanderthal, the resulting being would lack “the environmental and cultural factors that would have influenced how the original Neanderthals grew up.” One scientist says that the clones would be no more than “neo-Neanderthals.”

Bernard Rollin, a bioethicist and professor of philosophy at Colorado State University, doesn’t believe that cloning a Neanderthal would be a problem—the issue, he says, is how that clone would be treated once he or she was brought into the world. Would a clone have human rights

under the Constitution and international law? How much of a genome needs to be changed before someone is not considered human? Moreover, no one would be creating these clones just on a lark. They’d be created for research—to be studied and experimented on. Wouldn’t they need to give their consent?

“The ultimate goal of studying human evolution is to better understand the human race,” Zorich writes. “But what if the thing we learned from cloning a Neanderthal is that our curiosity is greater than our compassion?”

SCIENCE & TECHNOLOGY

In With the New

THE SOURCE: “The New Normal” by Emma Marris, in *Conservation*, April–June 2010.

CONSERVATIONISTS HAVE TRADITIONALLY focused their efforts on preserving “pristine” ecosystems—those unchanged by modern man—but an upstart brigade of

ecologists is calling on the scientific establishment to pay more attention to what they call “novel ecosystems,” writes Emma Marris, a writer working on a book about proactive conservation approaches. These are areas not under human management where species that have not previously existed together (and therefore did not evolve together) are now living in the same place. By one estimate, such ecosystems cover 35 percent of the earth, a proportion that is likely to grow.

Ariel Lugo, a scientist in Puerto Rico, has shown that novel ecosystems can be nearly as rich in species as native ones. They may also have more above-ground biomass and use nutrients more efficiently. Sometimes such ecosystems provide much-needed habitats for native species.

Peter Kareiva, chief scientist of The Nature Conservancy, says that studying novel ecosystems helps conservationists to “face the facts and be strategic” rather than try to deny their existence. In some cases, a novel ecosystem may be “better” at what are known as “ecosystem services”—processes that benefit humanity such as filtering water in wetlands, preventing erosion, and sucking carbon dioxide from the atmosphere. Should such ecosystems merit the same protection as pristine ones, or even more? That’s “a question we don’t talk about that much,” Kareiva admits.

But novel ecosystems have their skeptics. James Gibbs, an ecologist at the State University of New York, Syracuse, warns that increased biodiversity is not inherently a good

thing. For example, in Clear Lake in northern California, the number of fish species has risen from 12 to 25 since 1800. But species that were unique to that lake are long gone. The species there today can be found in many other lakes. Also, genetic diversity may decrease, as

plants descended from the small genetic pool of just a few invaders will have more genes in common than those that have evolved and bred over thousands of years.

Ironically, pristine places such as a rainforest or an old-growth forest often require intense human man-

agement to keep them that way. But for scientists interested in how environments change and evolve when new species appear, novel ecosystems can be “ideal natural experiments.” After all, Marris explains, “it takes a dynamic ecosystem to study ecosystem dynamics.”

ARTS & LETTERS

Barnes Storm

THE SOURCE: “No Museum Left Behind” by Lance Esplund, in *The Weekly Standard*, May 31, 2010.

MANY IN THE ART WORLD ARE celebrating the Barnes Foundation’s relocation from Merion,

Pennsylvania, to its new home next to the Philadelphia Museum of Art in 2012 as the long-overdue unlocking of one of the world’s premier art collections. But to defenders of the original vision of Albert Coombs Barnes

(1872–1951)—and count *CityArts* senior art critic Lance Esplund firmly among that number—the uprooting is a sacrilege, “no different from the destruction of a Gothic cathedral.”

The Barnes collection has always excited attention not only because of its scale (conservative appraisals put its worth between \$20 billion and \$30 billion), but the uniqueness of its arrangement. Barnes eschewed the con-



Henri Matisse called the Barnes Foundation the “only sane place” to view art in America. Above, he gazes upon a painting of his own on display there.