Earth, while the drill (*Mandrillus leucophaeus*) - a West African monkey - is threatened by habitat loss and hunting. With countless endangered animals teetering on the brink of extinction throughout the world, the work of preservation has never been more important. The scientists report in Nature Methods that their stem cells could be made to turn into different types of body cell.

"The best way to manage extinction is to preserve species and habitats, but that is not always working," Oliver Ryder, director of genetics at the San Diego Zoo and co-leader of the study. About five years ago, Loring was contacted by Ryder, who was keen to collect stem cells from endangered animals. Obtaining stem cells by sacrificing the fertilized embryo of an endangered species was out of the question, so Loring tried to think of other sources, but came up empty. A couple of years later, in 2007, teams at the University of Kyoto in Japan and the University of Wisconsin in Madison revealed that cells called fibroblasts from human connective tissue could be coaxed into a state resembling that of an embryonic stem cell by activating a suite of reprogramming genes in the adult cells. This kind of science entails a fair amount of trial and error, and the researchers expected it would work with the drill because of previous studies on primates. But the rhino was a different matter.

Both animals, the researchers said, were chosen because they could benefit from stem cells now. For instance, the drill primate suffers from diabetes when in captivity, and stem cell-based treatments for diabetes being researched in humans suggest the same may work in these primates. The drill is closely related to the baboon (genus *Papio*) and even more closely to the mandrill (*Mandrillus sphinx*). The rhinoceros was chosen because it is one of the most highly endangered species on the planet, with only seven animals, all in captivity, in existence. They haven't reproduced in several years, and because the population is so small there is a lack of genetic diversity, which could affect their survival. If the researchers can use the stem cells to make sperm and eggs from skin cells of deceased animals in the frozen zoo, they could reintroduce some genetic diversity into the population, while also increasing its size.

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Vietnamese exit

A critically endangered species of rhino is now extinct in Vietnam, according to a report by conservation groups.

The WWF and the International Rhino Foundation said the country's last Javan rhino was probably killed by poachers, as its horn had been cut off.

Experts said the news was not a surprise, as only one sighting had been recorded in Vietnam since 2008.

Fewer than 50 individuals are now estimated to remain in the wild.

http://www.bbc.co.uk/news/science-environment-15453390