SCIENCE & TECHNOLOGY

Study: Good News About Sumatran Rhinos

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A genetic study of Sumatran rhinoceroses is providing what scientists call “good news” for the critically endangered animal. Experts say fewer than 100 of them remain in existence.

Researchers report that the two wild rhino populations on the islands of Borneo and Sumatra showed unexpectedly good genetic health in a new study. The study also showed surprisingly low levels of inbreeding.

Inbreeding is the result of producing young from closely related parents.

The Sumatran rhinoceros is known for its two small horns and a thin coat of reddish-brown hair. It is the closest living relative to the wooly rhinoceros of the last Ice Age.

Nicolas Dussex helped lead the study that was published in Nature Communications.

"With such small population sizes, we were expecting much higher inbreeding," he said.

Dussex added that the findings suggest there may still be time to save the genetic diversity of the animal.

Researchers studied the genomes of seven rhinos from Borneo, eight from Sumatra and six from the former Malay Peninsula population.

The Sumatran rhinoceros is the smallest of the world's five rhinoceros **species**, weighing around 700 to 800 kilograms. The animal lives in rainforest areas. It also lives alone, except when mating and raising young. The animals once lived across a wide area of Southeast Asia, from the Himalayas to Borneo and Sumatra.

Illegal hunting, or poaching, and environmental destruction have hurt its population. The Sumatran rhinoceros population fell by about 70 percent over the past two decades.

Johanna von Seth was the study's lead author. She says genetic diversity is very important to the animal's long-term survival.

It permits, she said, "adaptation to future environmental changes and diseases." Adaptation means a change in an animal that makes it better able to live.

The researchers said steps such as moving rhinos for mating or using **artificial insemination** could cause an exchange of genes between the Borneo and Sumatra populations.

The Sumatran rhinoceros has shown low reproductive success in **captivity** and faces a high risk of inbreeding in the wild because of its small numbers.

Inbreeding creates a heightened risk of genetic problems. Scientists had feared that reports of health issues among these rhinos were evidence of a dangerously inbred population.

Love Dalén was a co-writer of the study.

"It's important to remember that the Sumatran rhino is still **on the verge of extinction** due to non-genetic factors," he said.

A factor is something that helps produce a result or effect.

Dalén said that the study showed that the species' genetics alone will not necessarily cause its extinction. But, problems from environmental destruction of its homelands and illegal hunting must be solved also, he said.

I'm John Russell.

Will Dunham reported on this story for Reuters. John Russell adapted it for Learning English. Caty Weaver was the editor.

Words in This Story

species -- *n. biology :* a group of animals or plants that are similar and can produce young animals or plants : a group of related animals or plants that is smaller than a genus

captivity -- *n.* the state of being kept in a place (such as a prison or a cage) and not being able to leave or be free : the state or condition of being captive

artificial insemination – *n. medical:* a medical process in which semen is used to make a woman or female animal pregnant without sexual intercourse

on the verge of – *expression* at the point when (something) is about to happen or is very likely to happen

extinction -- *n.*the state or situation that results when something (such as a plant or animal species) has died out completely