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The Unprecedented Plan to Save the Sumatran Rhino

**Conservationists have launched an urgent bid to save the critically endangered Sumatran rhino, which has a wild population of fewer than 80.**

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PUBLISHED SEPTEMBER 20, 2018

There's no creature on earth like the [Sumatran rhino](#).

With a thin coat of iron-tinged hair and a lifestyle adapted to the mountainous rain forests of Indonesia, these are the smallest rhinos on earth. They are also the most endangered rhino species—and isolation threatens to wipe them out.

Experts now estimate that around 80 of these rare creatures remain between the islands of Sumatra and Indonesian Borneo, and the survivors are split into around a dozen subpopulations with no gene exchange.

“They're in tiny little pockets, some as small as one and two left in the forest,” says [CeCe Sieffert](#), deputy director at the [International Rhino Foundation](#).

In fact, the remaining rhinos have become so fragmented, the world's experts now consider isolation the greatest threat to their existence, overtaking poaching and habitat loss. Making matters worse, due to a quirk of their biology, if females go too long without breeding they develop problems in their reproductive tracts that can prevent successful pregnancies.

Now, a coalition of international conservation organizations, including the National Geographic Society, [announced a new plan](#) today (Sep. 20)

to turn the animal's fortunes around. It's called the Sumatran Rhino Rescue.

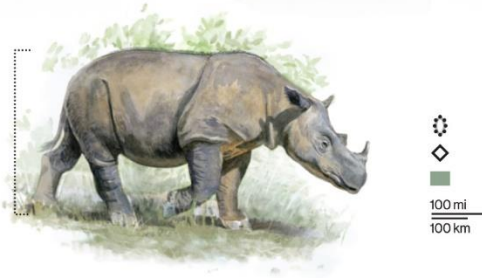
At its heart, the new effort aims to safely capture as many wild rhinos as possible and then transfer them to nearby sanctuaries where scientists and wildlife managers can assist in their reproduction.

There's currently only one such facility, called the Sumatran Rhino Sanctuary, built by the International Rhino Foundation in [Way Kambas National Park](#) in south Sumatra. Other facilities are planned for the north end of the island and across the way in Indonesian Borneo, too, provided the coalition can find enough wild rhinos from those regions to start captive breeding.

The project is led by the International Union for Conservation of Nature's Species Survival Commission, in coordination with Global Wildlife Conservation, International Rhino Foundation, National Geographic Society, and WWF. The Indonesian government has also welcomed the formation of the new coalition, with a spokesperson calling it "of critical importance" to their effort of establishing "a national conservation breeding program."

"If we wait a few more years, there won't be enough rhinos left to bring together," says [Barney Long](#), senior director for species conservation at [Global Wildlife Conservation](#).

"Every month that goes by with each animal not breeding is a lost opportunity," says Long.



## From Disaster to Hope

This isn't the first time conservationists have recommended rounding up Sumatran rhinos for captive breeding.

“There was a big capture operation in the ‘80s and ‘90s, which in some ways was a bit of disaster,” says Long. “The captures all went very well, but the animals were dispersed among numerous facilities, and we didn't know how to breed them.”

But the outlook is much different now, thanks to a scientist by the name of Terri Roth.

“We conditioned females to allow us to do rectal ultrasound exams so we could actually look at the ovaries and see what was happening,” says Roth, vice president of conservation and science at the [Cincinnati Zoo and Botanical Garden](#).

Using this and other techniques, Roth’s team was able to coax their captive female, Emi, to pregnancy in 1997. But it was not to be.

“I’d seen a heartbeat and a little fetus so we thought everything was developing fine,” says Roth. “And then the following week I did an ultrasound exam and the thing had just completely disappeared. It was like your worst nightmare.”

Over the course of the next two years at the Cincinnati Zoo, Emi would miscarry four more times. All the while, Roth tweaked her methods, finally deciding to supply the rhino with supplemental hormones. Then, about 36 hours after the events of 9/11, a modern conservation miracle took place.

“The first calf was born on September 13<sup>th</sup>, 2001, and my last concern was alleviated as he was coming out,” says Roth. “I saw him move his front leg, and I knew he was alive.”

They named him Andalas—an old Indonesian word meaning *Sumatra*—as he was the first Sumatran rhino born in captivity in 112 years.

## **New Genes**

Emi gave birth to two more calves in the next six years, but in 2009 she unexpectedly died from hemochromatosis—a condition where the body absorbs too much iron.

But all was not lost. Back in 2007, the decision had been made to transport Andalas to his ancestral home in Indonesia, where he went to live at the 250-acre Sumatran Rhino Sanctuary, a facility built by the International Rhino Foundation.

With Roth's guidance, this sanctuary was even able to help Andalus sire a calf of his own by 2012. As the [first captive Sumatran rhino to be born in Southeast Asia](#), the staff named him Andatu, which means "gift from God."

Another calf, a female named Delilah, was born in 2016.

It is upon this legacy that the Sumatran Rhino Rescue hopes to build. The sanctuary currently has seven rhinos in its care—three males and four females, none of which are pregnant.

Two of these are breeding age, says Sieffert, and one has had a few miscarriages.

But even if the new hormone techniques are able to produce more calves at the sanctuary, the facility will still suffer from an enormous problem.

"They need new genes," says Roth. "Too many Sumatran rhinos now are related to the Cincinnati line, and we need some new, fresh animals in that population."

## **Catching the Stragglers**

The plan to capture new rhinos from the wild is already underway.

Going off photographic evidence obtained with remote cameras, WWF is already trying to locate a lone rhino thought to be living in a mining concession in Indonesian Borneo, also known as Kalimantan. And more cameras are going up all over Sumatra in an attempt to zero in on other dwindling populations in peril.

"We're trying to get the stragglers that don't have the opportunity to breed," says Sieffert. "We just can't let that critical genetic material be lost forever, so we're trying to catch it while we can."

You may be wondering: How does one catch an animal that weighs 1,700 pounds? Conservationists do so by creating holes covered with branches and leaves, which rhinos fall into. Believe it or not, it's the safest and most effective method for catching them. "It sounds risky," says Long, "but it's not something that's been seen to cause injuries."

Depending on how the captures go, the hope is to house a handful of the animals at a new facility being built at the sanctuary in south Sumatra. This is because the current facility is already at full capacity, says [Zulfi Arsan](#), senior veterinarian at the sanctuary.

Then, if enough other animals can be secured, the goal will be to construct new captive breeding facilities in north Sumatra and maybe even across the Java Sea in Kalimantan.

Doing so will neither be easy, nor cheap. Sumatran rhinos are solitary animals that become violent when housed together. At the Sumatran Rhino Sanctuary, for instance, each animal lives in its own section of fenced off rain forest, with uninhabited sections serving as buffers in between enclosures. Every six months, Arsan and his colleagues rotate the animals to allow the plants on which the rhinos depend, like macaranga, to grow back.

This is why each of the founding members of the coalition have agreed to donate \$1 million at the start of the project with the hope to raise \$30 million in total.

"We haven't even started actively fundraising yet and we have a good chunk of the budget in the bank, so that's a good sign," says Jon Paul Rodriguez, chair of the IUCN's Species Survival Commission. "There's no other best case scenario I can imagine for the Sumatran rhino at the moment."

"It sounds like a lot," says [Jonathan Baillie](#), chief scientist at the National Geographic Society. "But when you kind of think about how

special this species is and the amount of years that it's been on the planet, it's not a big investment at all.”

## **The Road Ahead**

“What’s being proposed in the Sumatran rhino conservation plan is something that I would have been deadly opposed to thirty years ago,” says Eric Dinerstein, an expert on Asian rhinos who is not affiliated with the project.

Dinerstein spent 25 years working with WWF on conservation and he explains that he was among those who thought conservation dollars would be better spent protecting the animals in the wild. After all, a similar strategy had already been proven effective for the southern white rhinos of KwaZulu-Natal and the greater one-horned rhinoceros

However, given the current state of affairs in Indonesia, Dinerstein says his outlook has changed.

“Now I’m the biggest supporter of it, because I think it’s the only chance that Sumatran rhinos have to survive as a species,” he says.

In his view, the only way forward is to put as many baby rhinos on the ground as possible—and fast. A task easier said than done, of course.

“Establishing multiple facilities that are successful in breeding the species is going to be much more challenging than people anticipate,” says Roth.

“It’s really hard to transfer that information and technology and see it used correctly by others. The team at the Sumatran Rhino Sanctuary right now is doing a wonderful job, but it has taken us a long time to establish a team that really does understand it and is doing it correctly,” Roth says.

With a critically endangered species, there will always be risks involved, says [Margaret Kinnaird](#), wildlife practice leader for WWF International.

“It doesn’t always go right, and there are still chances that we lose some animals,” she says.

“But we’ve got to give these guys and girls a chance. And I think this is how we give them that chance.”