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1984: the meeting that changed everything for Sumatran rhinos

The untold story of two days in Singapore that launched a wildly ambitious, and calamitous, captive breeding program.

BY JEREMY HANCE ON 20 SEPTEMBER 2018

Mongabay Series: Asian Rhinos

- *A 1984 agreement between zoos, conservationists and government officials marked the formal beginning of an international program that brought 40 Sumatran rhinos into captivity in an attempt to ward off extinction. Within 11 years, the program collapsed.*
- *The program was long viewed as an epic failure due to high mortality rates and the lack of live births for over a decade; it also paved the way for later breeding successes that just may offer the Sumatran rhino hope for the future.*
- *As conservationists mull a new plan to capture more rhinos, what lessons do past efforts offer?*

This is the first article in our four-part series "The Rhino Debacle."

It's hardly the most likely place to meet a Sumatran rhino. But as you enter Zimmer Hall at the University of Cincinnati, deep in the heart of the Midwestern United States, there he is: Ipuh. A one-ton, taxidermed behemoth, a prehistoric relic who only passed away in 2013.

In life — well, really in death — he resembles a purple-hued, thick-skinned antediluvian hog: his horns have been shaved off; his thick, reddish fringe hair is nowhere to be seen. His expression could be called somber, even grim. But I've been fortunate to have met enough Sumatran rhinos in my life to know they are actually gentle, joyful, singing creatures. So I try not to take him too seriously as he rests between the vending machines and lounges for students.

Ipuh is not exactly famous. But he probably should be: Ipuh is the first Sumatran rhino bull to sire a calf in captivity in 112 years.



Born in the wilds of Sumatra, Ipuh is to-date the most prolific male breeder of his species in captivity. His taxidermed remains now reside at the University of Cincinnati. Image by Jeremy Hance for Mongabay.

The calf, a male named Andalas, was born in 2001, the direct and long-awaited result of a historic meeting 17 years earlier in Singapore. The meeting launched a global captive-breeding program for the species — a program that would meet with tragic failure and much folly until, finally, the first taste of success in Andalas. Four more calves have been born since.

But it's a program with which conservationists are still struggling to reconcile: was it a poor strategy that ended in total failure, or has it given us a second chance to save the species?

Today, the Sumatran rhino is arguably the rarest large terrestrial mammal on the planet. Officially, experts say around 100 animals survive in the wild, but unofficially the number [could be as low as 30](#). We have an additional nine rhinos in captivity, but only two of those have been proven to breed: a female named Ratu, and Andalas — yes, that first son of Ipuh and Emi, his wild-born bride.

Now, conservationists are mulling a new capture program to add new rhinos to the small pool of captive rhinos in a last-ditch effort to ensure the species survives the Anthropocene.

The 1984 Meeting

A 39-year-old Tom Foose, conservation coordinator for the Association of Zoos and Aquariums (AZA), arrived in Singapore in October 1984 with a bold new plan to save the Sumatran rhino from extinction. He'd already laid the groundwork with Sabah, one of Malaysia's Bornean states, for a proposal to catch several Sumatran rhino pairs and split them between local facilities and several U.S. zoos, which would be footing the bill.

Now he just needed to convince a group of rhino experts and conservationists, brought together by the Asian Rhino Specialist Group of the International Union for Conservation of Nature (IUCN), that this was the best way forward.

"He's really nerdy. He's unfit, short-sighted, addicted to Coca-Cola, not a field person at all," said John Payne, at the time a project manager for WWF-Malaysia and a representative of the Sabah Forestry Department. "He's really the brains. He realized somehow ... that the Sumatran rhino was going to go extinct. And the reason was that there were too few and they weren't breeding. It was very clear to him then. So, he got a bee in his bonnet, right?"

An ocean away, someone else appears to have been harassed by the same bee. John Aspinall, an eccentric zoo owner from the U.K. who'd made his fortune as a bookie for the British upper class, had hatched a similar plan to capture wild rhinos and split them between the host country and the financier — in this case, Indonesia and Aspinall's zoos in the U.K., respectively.

"Several of the personalities in human history were misunderstood, criticized or even condemned at first, to recognize only much later their geniality. I would place the conservationist John Aspinall among them," Francesco Nardelli, the executive director of the Sumatran Rhino Project, said of the man he worked with for 12 years. "A man of substance."



Nico Van Strien, Tom Foose, Mohammed Khan bin Momin Khan and Ed Maruska, then the director of the Cincinnati Zoo, at a 2001 event celebrating Andalus, the first rhino born as a result of the captive breeding program. Image courtesy of Terri Roth.

There was also Nico Van Strien, just 38 and already the undisputed expert on all things Sumatran rhino. Having just published a landmark 211-page dissertation on Sumatran rhino behavior and ecology, van Strien could be described as the *only* living academic expert on wild Sumatran rhinos.

Van Strien touched down with his latest estimates of how many animals were left across dozens of potential populations. Already, the species was one of the most endangered large mammals on Earth. It was believed to be extinct from most of its range, from northeastern India to Vietnam, only surviving in Sumatra, Borneo and the Malay Peninsula, though a few were thought to still linger in Thailand and Myanmar.

Van Strien's 1984 figures put the population at somewhere between 481 and 873 (in 1986, the IUCN would estimate between 425 and 800 were left). But many of his numbers are just educated guesses. In several places, van Strien noted, the numbers were unknown or else based on "unconfirmed reports" or "tracks." In all likelihood, the real numbers were probably closer to van Strien's low estimate, and maybe even considerably below that. Many of the large populations he cited either vanished in

the next decades or were never there in such numbers to begin with. Kerinci Seblat National Park in Sumatra, for example, was supposed to have 250 to 500 animals; officials announced the rhino extinct there just 20 years later.

The meeting also included several heads of U.S. zoos keen on the project, as well as a number of government officials from Malaysia and Indonesia. Of the 23 attendees, only two were women. Eight of the attendees were non-westerners from Southeast Asia, representing Malaysia, Indonesia and Singapore, where the meeting was held.

The meeting, described in its summary report as the "Ad Hoc Sumatran Rhino Meeting," would forever change the previously haphazard nature of Sumatran rhino capture and captivity. And it would kick-start a program that would go down, for a long time, as a total and absolute failure, a conservation debacle of epic proportions: A catastrophe that would take decades to produce something real, but now requires a second look.

Early captive Sumatran rhinos, 1641 to 1984

According to the aptly titled book *The Rhinoceros in Captivity: A List of 2439 Rhinoceroses Kept from Roman Times to 1994*, the first Sumatran rhino known to be kept in captivity was in 1641. It was housed in Aceh, at the northern tip of Sumatra, when the region was a powerful sultanate. Two hundred years would pass before another Sumatran rhino was recorded as being brought into captivity.

During the 19th century, 37 animals were brought into captivity, including two sent to the Barnum & Bailey circus in the U.S.; one of them died within a year, the other survived just five.

In 1889, an even more notable event occurred: a Sumatran rhino that had been living at Calcutta Zoo for several years successfully bred in captivity, the first we know about. At the time, Calcutta Zoo, India's oldest, was run by an ahead-of-his-time biologist, Ram Brahma Sanyal, who wrote a hugely influential handbook on captive care and breeding. The calf, a male, lived to the age of 14.

Things slowed down considerably over the next half-century, likely due to the two world wars and an increasingly small population of animals (though one rhino did somehow end up in Osaka, Japan).

The next major coordinated effort to capture Sumatran rhinos was an expedition in 1959 to Sumatra led by Switzerland's Basel Zoo and Denmark's Copenhagen Zoo. According to the 1964 book *Rhino Country* by Hakon Skafté, the expedition was the brainchild of Svend Andersen, then the director of Copenhagen Zoo. Andersen told Skafté that what he most wanted was a specimen of "the hairy Sumatran rhinoceros."



A dense, soaring rainforest in Riau province, on the east coast of Indonesia's Sumatra Island. Image by Rhett A. Butler/Mongabay.

An expedition was launched to an unprotected forest near the Siak River in Riau province. Skafté described it in a 1962 article as "one of the most exciting big-game safaris imaginable." Skafté and Arne Dyhrberg, also from Copenhagen Zoo, had local men encircle known rhino trails with a 10-by-10-meter (30-by-30-foot) palisade fence with six trap doors that would fall when a rhino entered.

Improbably, the first rhino arrived with an unexpected guest: a Sumatran tiger, which eventually escaped the trap unharmed. But the rhino didn't survive. In his book, Skafté blames local workers for poisoning her due to a dispute over pay, though he offers no real proof. However, the team soon managed to catch another female, which they named Subur. They sent her to cold Copenhagen, where she lived on a diet of hay, carrots, apples and potatoes (for days en route she ate only rice balls). Miraculously, despite her odd diet, she survived 13 years in Denmark.

The expedition caught three more females after Subur. One died before it could be transported. The other two both died in 1961, one in Basel, the other in Bogor, Indonesia. The expedition did catch one male, but he escaped the trap, making any attempt at breeding impossible.

In the more than 300 years between 1641 and 1984, only 56 Sumatran rhinos had been recorded as being kept in captivity. And by 1980, all of them were dead.

Two Days in Singapore

"We at IUCN consider this a most important occasion, where precedents may be set for other species [in] other regions of the world," Robert F. Scott, the executive officer of the IUCN Species Survival Commission, said at the opening of the 1984 meeting, according to its carefully documented minutes.

It is clear from the minutes that many participants believed the decisions made regarding the Sumatran rhino could have far-reaching impacts for other species. If zoos and conservationists could succeed in captive breeding of this species, then they could do so for other nearly extinct species. It was an exciting time for zoos, at the time undergoing a major transformation from facilities largely viewed as amusement for people into institutions that could make a serious contribution to conservation. Captive-breeding programs were already ongoing for species like the Arabian oryx and the golden lion tamarin, both of which would prove successful in decades to come. The zoos hoped that a Sumatran rhino captive-breeding program could help prove zoos' conservation worth.

But not everyone was in favor of a captive-breeding program for the Sumatran rhino.

"More people were against captive breeding but a small core group went ahead," says Mohammed Khan bin Momin Khan, then the head of the Asian Rhino Specialist Group as well as the Malaysian Wildlife Department director, who attended the meeting.

The most outspoken critic of captive breeding proved to be Rudolf Schenkel, a rhino expert with Basel Zoo (but perhaps best known for his research on captive wolves). According to the minutes, Schenkel repeatedly and effusively argued against captive breeding, saying that an animal in captivity "loses its 'meaning' and 'dignity'" due to its disconnection from the ecosystem in which it evolved.

"He was dead against capture. It's like a mantra for him," says Payne, who noted that Schenkel put a "damper" on parts of the meeting. "But everyone sort of politely overruled him."

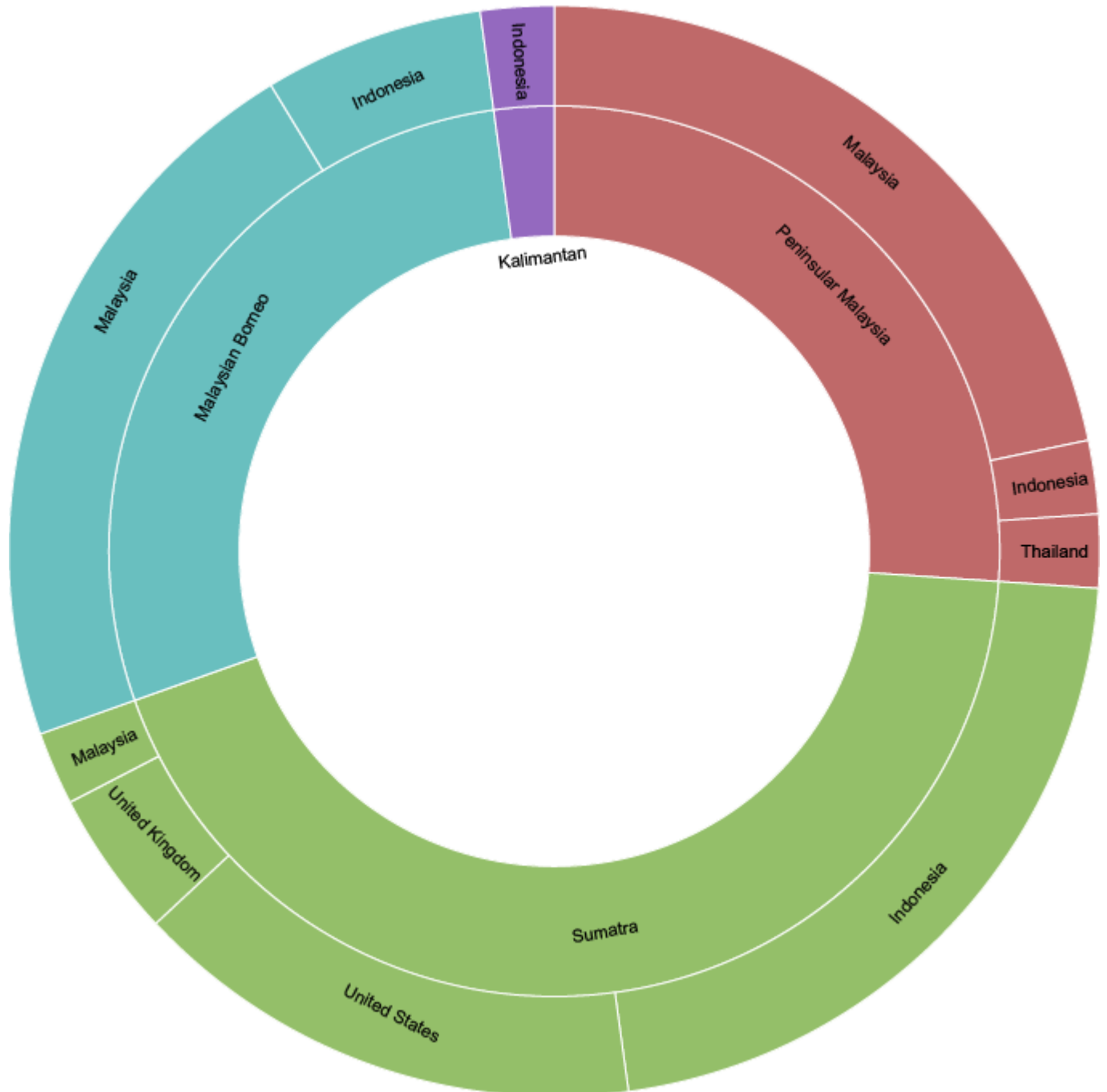


A baby Sumatran rhino, born in captivity at the Cincinnati Zoo, displays the species' characteristic shaggy fur. Transferring rhinos to zoos in the West was a controversial move, but one that proved critical for the program's success. Photo courtesy of the Cincinnati Zoo.

There was also considerable debate over whether captive breeding should be restricted to Malaysia and Indonesia, which still had surviving Sumatran rhinos, or whether U.S. and U.K. zoos should get a crack at it too. Keeping the animals in an environment to which they were accustomed was, of course, a key argument. But national pride also played a role.

Still, the argument for sending at least some pairs abroad would win out partially — and fatefully, as it turned out. The reason to do so, articulated by Foose, from the Association of Zoos and Aquariums, included the experience of zoos in the U.S. and Europe in caring for other rhino species and their general expertise at captive breeding and management, as well as cutting-edge research into "reproductive technology including artificial insemination, embryo transfer, and cryopreservation." The interested zoos included some of the best in the world, from San Diego to Cincinnati to the Bronx Zoo.

Bringing Sumatran rhinos to the U.S. would also give "wider recognition and support for the species," Foose said.



This graphic shows the locations where wild rhinos were captured in the inner ring of the chart. The outer ring shows the locations where the rhinos in the program are currently or were at the time of their death. Chart by Willie Shubert for Mongabay.

At one point in the discussions, according to the minutes, Warren D. Thomas, the director of Los Angeles Zoo, "elaborated on reasons and realities why self-interest of zoos must be considered."

This point is tantalizingly left at that, but one can imagine that Thomas must have pointed out that if the zoos involved were to put significant amounts of money into the program, they would want a return on their investment, i.e. living Sumatran rhinos at their institutions. The zoos were not only willing to pay for capture and transportation, but also to sponsor increased on-the-ground conservation efforts. Much of this had already been hammered out: both the early agreements between the AZA and Sabah and Aspinall's Howletts Zoo and Indonesia included technical and financial assistance.

"The debate ... was actually much less than expected," said Nardelli from the Sumatran Rhino Project. "The Indonesian and Sabah government representatives were already convinced to proceed with a captive-breeding project."

During the meeting, Aspinall brought up the case of the kouprey as a cautionary tale. He noted that while there had been "many" conferences on the forest ox from the Southeast Asian mainland, they had all resulted in zero action.

"The kouprey is now reduced to 10-20 and only a miracle can save it," he told the meeting.

It was an apt point. The last confirmed sighting of a kouprey came in 1983, a year before the rhino meeting. It's now assumed extinct.

Over the two-day meeting, the participants appeared to take Aspinall's point to heart. Though they could disagree, and they frequently did, they didn't walk away with nothing to show for it.

"Actually, it was a very good discussion," Payne said.

In the end, the group agreed to the captive breeding of Sumatran rhinos, both in-country and abroad, for animals with "no hope of survival in the wild," what they often termed "doomed" animals. This meant only taking animals from populations too small to survive in the long term or in habitats already slated for clear-cutting.

It was a choice that would have a longstanding impact on the program's success.

The meeting also agreed on not mixing the three known subspecies of Sumatran rhino until more taxonomic work was done to understand the differences between them — another decision that would have considerable impact. To date, the

subspecies have never been mixed, though [scientists now say it should be done if at all feasible](#).

The group also agreed to set up a new organization to oversee the efforts and coordinate between the various countries and institutions. This would eventually become the Sumatran Rhino Trust, an organization that would only survive until 1993.

The meeting lasted two days, and anyone who has ever attended such an event might wonder if the most important conversations actually happened over lunch, tea and late-night drinks. But nonetheless, they walked away with a consensus plan.

Foose must have been ecstatic.



Jeram, pictured here tied to an oil palm, was the first Sumatran rhino taken into captivity since the early 1960s. She was found in a palm oil plantation in Peninsular Malaysia in 1984 and was nearly handed over to poachers, but wildlife officials got there first. Image by Mohammed Khan bin Momin Khan.

Five months before the meeting in Singapore, an incredible event had taken place in Peninsular Malaysia. A half-blind female Sumatran rhino had wandered into an oil palm plantation. She was caught by workers, tied up and surrounded by hundreds of locals. Khan says he had to race to the site to beat “animal dealers” already en route.

"I couldn't believe it was really a Sumatran rhinoceros," Khan [told the media at the time](#). "I was worried the animal might die of fright and more worried it might be chopped up and exported before we got there."

Amazingly, Khan got there first, and Jeram, as she came to be known, survived the ordeal. Khan and his team rapidly built a crate, and by midnight they were transporting her to Malacca Zoo.

By the time of the meeting, then, Peninsular Malaysia already had one rhino in captivity, the first one caught in a quarter-century. And conservationists were confident they could catch more animals now and breed the hell out of them.

But the whole thing turned out to be much more complicated than anyone could have ever guessed. Within just 10 years, the meeting in Singapore would come to resemble a drunk driver getting into a car — barely able to make out the road ahead but certain they would arrive home just fine.



After her capture in Peninsular Malaysia, Jeram lived 18 years in captivity in the Malacca Zoo and is believed to have died from old age. She was the first of a capture program that would last over a decade and catch 40 rhinos. Image by Mohammed Khan bin Momin Khan.

[Continue to Part Two of "The Rhino Debacle."](#)

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Editor's note: this story has been updated to correct the name of the University of Cincinnati, and a reference to Nico van Strein not having seen wild rhinos has been removed. In a Dutch-language interview in 1988, van Strein said he had both seen and heard rhinos during his year of field research.