

Hanging On

In Indonesia, orangutans are fighting for survival. Extinction would not only deprive the world of a cuddly primate but also remove a vital link to man's past.

BY SIMON ELEGANT BALIKPAPAN – Time Asia News, 2001

Every day Carel Van Schaik heard the chain saws as gangs of illegal loggers cut through the trees across the river from his orangutans' forest habitat. And every day the fighting between Acehnese rebels and the army moved closer; mutilated bodies sometimes were found dumped in these very forests. Indonesia was literally falling apart, village by village, tree by tree, and that meant extinction was nigh for myriad species, among them Van Schaik's orangutans. Environmentalists once said the apes might be extinct in a matter of decades; their increasingly frantic warnings now spoke of just years. Orangutans need virgin forest, and even senior officials acknowledged that all virgin forest in Sumatra would probably be gone in five years. The last primary forest on neighboring Borneo would disappear in a decade, predicted Walhi, the country's leading environmental group.

The buzz of chain saws and those decomposing corpses were warnings that Van Schaik, and the orangutans he was studying, were running out of time. If these noble great apes were driven to extinction, as now seemed likely, that would mean more than the tragic passing of another of God's creatures, it would also mean losing some potential understanding of ourselves. For 25 years, the Duke University primatologist had been chasing orangutans through the swamps of Sumatra. Now he was starting to achieve startling new insights into some of our most fundamental questions: What made us men and not monkeys? When precisely did that divergence occur? And, even more intriguing, what lit the spark of learning and shared knowledge that eventually became mankind's bonfire of culture and science?

He already had part of the answer. Patient study had revealed that some orangutans were avid tool users, for example employing short sticks to shave stinging hairs from the fat-loaded fruit of the neesia tree. This was a skill that seemed taught by one generation to the next, not inherited. In other words, the orangutans had culture, previously the single greatest distinguishing mark of humanity.

But for conclusive proof, Van Schaik needed a control group of directly comparable orangutans living in the same ecological circumstances that still broke open the

fruit and plucked out a few accessible seeds, wasting most of the nutrition. His own group, he knew, had a much higher degree of cooperation in daily tasks such as food sharing and grooming. If his theory was right, the higher sociability that allowed orangutans to teach one another how to more efficiently access the fat-rich fruit seeds provided them with a huge evolutionary advantage over their less friendly cousins. That same evolutionary encouragement of cooperation among early humans, Van Schaik theorized, had been the mechanism that had separated us from beasts. To complete his study and expand our understanding of the world, he needed orangutans—wild orangutans, rather than the apes in captivity at preservation centers and zoos.

But because of the chaos the country has fallen into and the brutal economics of development, the orange apes were on the verge of a grisly extinction, in danger of becoming the first ape to disappear from the wild. Perhaps 5,000-6,000 survived on Sumatra, half the number that existed as recently as 1998. There are 10,000-15,000 on Borneo, a decline of one-third in the same period. "Orangutan survival totally depends on the survival of the tropical forest," says Birute Galdikas. "It's as simple as that." Galdikas has been studying orangutans since the late 1960s, when she was dispatched to Indonesia by Louis Leakey, the world-renowned anthropologist who, along with his wife Mary, laid the foundation for modern theories of human origins. Leakey's two other "angels"—sent out at the same time—were Dian Fossey and Jane Goodall. Goodall gained fame for her work with chimpanzees, detailing for the first time intercommunal warfare and cannibalism. Fossey, the subject of the Sigourney Weaver film *Gorillas in the Mist*, was instrumental in saving silverback gorillas from extinction.

Although all three women started out around the same time, the orangutans remain the least studied of the four great apes (there are two distinct species of chimpanzee) that are humankind's closest relatives, sharing some 97% of our DNA. In part that's a matter of numbers—there are thousands of chimpanzees in zoos in the U.S. alone, whereas orangutans barely exceed 100. But there is also a practical problem: chimps and gorillas are both essentially ground-dwelling group animals. Orangutans are solitary and spend most of their time in the high canopy of the rain forest, making even short-term tracking virtually impossible.

Their lifestyle does, however, make them the easiest apes for humans to identify with. Because of their more solitary nature, orangutans display a more contemplative intelligence than the often frenetic chimpanzee or the gigantic, seemingly dopey gorilla. One look into an orangutan's almost human, emotion-charged eyes, and there's no denying our intimate kinship.

Nobody knows this better than the six young women who are surrogate mothers to orangutan babies brought in for rehabilitation at the Balikpapan Orangutan Foundation on the west coast of Borneo. The orangutans, most of whom have been confiscated from illegal wildlife traders, some of them as far afield as Japan and Taiwan, are often in a state of shock, having just seen their mothers killed by poachers. "There's no difference between human babies and the orangutans," says Wiwiek, an open-faced 24-year-old surrogate mother dressed in her working clothes, a white jumpsuit and green rubber boots. "We have to feed them with a bottle, bathe them, put them in Pampers and sing them to sleep. It feels like taking care of one of your own."

Babies like Fiona need all the help they can get: only one in three survive. The six-month-old arrived only a few days earlier and sits pressed at the back of her cage, staring blankly out, her huge eyes numb with fear, clutching herself tightly and rocking back and forth ceaselessly. But with luck and good mothering, she too will be transformed within weeks or months into one of the scampering, mischievous brats swinging effortlessly through the air in the playground next door.

But these captive apes become intellectually dim cousins of their wild predecessors. "Orangutans are naturally the most intelligent of the great apes," says Willie Smits, a Dutch forester turned orangutan advocate. "They're so close to us, we can learn a huge amount about our own physiology, psychology and early origins." Smits talks enthusiastically of Van Schaik's research. The "spark" that enabled Van Schaik's particular group to use tools was a much higher level of sociability—sharing food, helping one another in tasks such as food collection—than is usual for orangutans. That in turn speaks volumes about how human cooperation was nurtured by natural selection, how hominids working together with their chipped flints to skin animal carcasses blossomed into the builders of pyramids and space shuttles.

The voluble Smits, a former high school wrestler, ticks off a list of new findings just beginning to reveal what we will lose if wild orangutans become extinct. Often dubbed the world's best field botanists, orangutans are also talented pharmacists, treating their illnesses with forest plants. Because of their similarity to humans, the benefits are obvious. Plagued by a splitting headache while walking in the forest, Smits remembered seeing a slumped female orangutan clutching her head and groaning, only to make what seemed to be a complete recovery after eating some flowers from a nearby bush. "I immediately went to a bush of these purple *fordia splendissima* and ate some of the flowers and within 15 minutes my headache was gone."

Still optimistic in the face of the overwhelming odds stacked against the orangutans, Smits boasts that he has traveled to Washington with "a letter of authorization from the Indonesian government in my hand to set up a debt-for-nature swap," whereby a portion of Indonesia's foreign debt would be paid off in return for the creation of a huge protected area in central Borneo of some 700,000 hectares. Considering the utter chaos in Jakarta, it is, at the very least, a highly optimistic plan.

Birute Galdikas is also trying to protect a larger area of forest in central Borneo, the much-abused Tanjung Puting National Park, the area she has been using for her research since the 1970s. In the past, Galdikas has often exploited her considerable fame to lobby Presidents and Prime Ministers. But with the collapse of authority in Jakarta, her focus has narrowed down to the communities living in and around what is left of the national park. They are both the source and solution to the problem. "These days it is impossible to distinguish the local community from illegal loggers," she says.

Beset by such seemingly unstoppable forces, the future looks very dark indeed for orangutans. So dark that even a primatologist like the affable Robert Shumaker of the National Zoo in Washington, who takes evident pride in his scientific objectivity, is overwhelmed by the sheer finality of the end they face. "My wife is six months pregnant and the idea that I may have to tell my son that I saw it happen, that we let this happen, we let them just disappear ..."

There is one, rather forlorn hope. Behind Shumaker a group of hooting sub-adolescent orangutans chases one another around a large cage, one of a series of such enclosures in which the 200 or so orangutans inhabiting this rehabilitation center live for five years as they are prepared for release into the wild. There are two other such programs releasing apes into Borneo's dwindling forests.

But even if the programs are successful—and scientists say the chances are as low as one in five—the orangutans that graduate are very different from their wild cousins. In the forest, orangutans spend eight years under the exclusive tutelage of their mothers, learning to distinguish among 4,000 different plants, absorbing the details of location and fruiting time of every tree in a 100-hectare range. And, yes, probably learning how to use certain types of tools, even if they haven't all solved the problem of gaining access to the fruits of the neesia tree.

Van Schaik, seeking to find that control group of orangutans to answer those great questions about men and monkeys that could only be answered here in the wild, crossed the Simpang-kiri river, persuading the illegal loggers to give him rides through unending kilometers of rotting stumps and splintered branches. He

was just a tourist, he told them, but had they by any chance seen any neesia trees still upright? He finally hit pay dirt in August of 1999. "On our last trip in," the lanky Van Schaik recounts, "the loggers said, yes, there are a few crooked trees left that they had missed. And when we found them, we saw that there were some fruits scattered around where the orangutans had dropped them with just one small piece broken off like in Borneo, the rest untouched, and I realized that these monkeys, just across the river from my orangutans, didn't get it. That was when I knew we had really discovered the beginnings of culture."

But the flash of triumph soon turned to ash. Soon after the momentous discovery, Van Schaik's friend of 20 years and chief collaborator, an Acehnese named Idrusman, was returning from Jakarta by bus one evening when anti-Jakarta fighters stopped the vehicle and singled out the non-Acehnese for execution. Idrusman made the mistake of speaking up for three Javanese colleagues with whom he was traveling. All four had their throats cut. Van Schaik abandoned his mission soon afterward. He now spends most of his time teaching at Duke University in North Carolina and has never been able to return to the Sumatra swamps that were so central to his life's work. He can't carry on his experiments because, he laments, the human-trained orangutans are "intellectual paupers from the dark ages." Short of a miracle, though, these dark-agers, thrust into small patches of remaining forest to bumble around, surviving by trial and error, will soon be all that remains of a once-proud, possibly cultured species.