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Traders from Nagaland threaten Assam's rhinos

In 2007 rhino poaching rose to 20 animals in India's Kaziranga National Park in the State of Assam. This was a four-fold increase compared with the previous six years' annual average. In 2008 Rajiv Gandhi Orang National Park was hit by growing numbers of poachers who killed seven rhinos – over 10% of the population. Assam is famous for its Indian rhinos which number more than 2,000. Over 90% are found in Kaziranga on the banks of the Brahmaputra River where, as with Orang and also Pabitora Wildlife Reserve, the fertile floodplains provide nutritious grass that supports large populations of wild animals. The Assam State Forest Department, with help from NGOs, has worked tirelessly to protect the rhinos in these three areas. It was thus a shock that poachers had the upper hand in two of these regions in 2007 and 2008.

The main reason for increased rhino poaching in Kaziranga in 2007 was that a new and inexperienced senior officer was appointed who took too long to understand how to combat the poachers. Discipline and morale sank amongst the forest guards and patrol work became less effective. Many of the old guards had been retiring over recent years and were not being adequately replaced, nor had the new guards been properly trained. The 138 anti-poaching camps were becoming increasingly under-manned and run down, which compounded low morale. Intelligence funds are also a vital component of a successful anti-poaching strategy, as information on poachers entering the park is the most foolproof way of catching them and saving rhinos. Intelligence activities were insufficient in 2007, with neither enough funds nor expertise by the senior officer in how to use

the information collected.

The turning point in the poaching increase in Kaziranga came in early 2008 when a rhino and her calf were shot as they wandered out of the park. The calf quickly died, and the mother fell down. The poachers hacked off her horn while she was still alive and, bleeding, she rose to her feet and wandered around for 36 hours before finally dying from blood loss. Bibhab Talukdar, who runs Aaranyak, an NGO in Assam helping to protect rhinos, and who is also the Chair of the IUCN-SSC Asian Rhino Specialist Group, photographed the injured rhino and sent the picture to contacts worldwide. The resulting uproar led to the Prime Minister's involvement to clamp down on rhino poaching in Kaziranga, a World Heritage Site. Police arrested more than ten rhino poachers and traders around Kaziranga, and NGOs allocated emergency money for intelligence, fuel and anti-poaching equipment. By May 2008 a highly effective senior officer took over and reinstated strong leadership; more guards were also transferred to the park.

The men who patrol night and day are the crux of the anti-poaching success in Kaziranga and elsewhere. Vacant posts must be kept filled, and the guards' needs must be met, first and foremost by providing them with modern firearms and training, revamped accommodation, and better communication equipment. Strong leadership and support – for example, putting the guards' interests before VIP entertainment costs – is essential. Otherwise, discipline and morale can crumble, and with it rhinos can quickly be lost to poachers.

The other area of recent concern, Orang, continues to be threatened by a rise in poaching. Unlike Pabitora, which is a high-profile wildlife reserve, being close to Assam's capital Guwahati with many weekend picnickers, Orang is hard to reach and thus gets overlooked. The camps are in poor condition and the guards too few in number. The poachers have learned that the park is vulnerable.

The park desperately needs upgrading, perhaps with the help of Rajiv Gandhi's family in his memory as the park is named after him.

In order to control rhino poaching in Assam, the Forest Department needs skilled lawyers who can prepare a proper criminal case against the arrested poachers to win in court. Currently, poachers know it is all too easy to get off. Similarly, fines and jail sentences must be increased and publicized. It is urgent also, through informants, to catch the middlemen who generally provide the guns and set up the poaching gangs. Officials know they come from Dimapur in Nagaland, but there has been no follow-up to identify and arrest them. These individuals must be caught and prosecuted to break this trade racket threatening Assam's rhinos.

Lucy Vigne and Esmond Martin

Raising crickets to raise frogs

Self-sustaining, readily available populations of natural prey are a vital – and potentially limiting – factor for in-country amphibian rescues with *ex situ* breeding components, like those at El Valle Amphibian Conservation Center (EVACC) in Panama. An offer made in 2007 to help limit the need to collect (and maybe over-harvest) wild insects or import non-native insects has since become a successful invertebrate-rearing program supported by Roger Williams Park Zoo (RWPZ), Rhode Island, that could serve as a model for future amphibian rescues.

In 2007, Lou Perrotti from RWPZ set up insect-rearing facilities and developed a protocol for rearing the katydid (*Conocephalus saturatus*) at EVACC. Aaron Goodwin from Tulsa Zoo assisted with this effort, with funding from RWPZ's American Association of Zoo Keepers chapter. Soon the katydids laid eggs, but unfortunately they did not hatch. In 2008, Tom Mason from Toronto Zoo joined the effort and Lou and Tom targeted four species for breeding based on whether (1)

they had been fed successfully to the frogs living at EVACC and (2) Tom or Lou had knowledge about breeding them.

Based on observations in the field, three of the four species lay eggs in grass and other vegetation. However, the host grasses only got sufficient water, sunlight, and space when outside; the health of the grass was why *C. saturatus* eggs were not hatching. To accommodate these needs, an outdoor greenhouse was constructed. In addition to *C. saturatus*, two other target species were added to the greenhouse: 'red-butt' katydids, which are found in similar habitat to *C. saturatus* and appeal to the smaller frogs in the collection, and 'leafy katydids'. EVACC staff call the fourth target species the 'cricket katydid' because Tom knew from experience that its rearing protocol is similar to that of domestic crickets (dry plastic containers with egg crates, a water source, and dirt for laying eggs).

Five weeks after the outdoor enclosure was built, hatchings of all four species were observed. The biggest challenge facing the greenhouse is establishing the grass for the invertebrates to eat without it getting devoured. To address this issue, the colonies are being supplemented with other nutrient options such as carrots, greens, other vegetables, bee pollen, and other dry foods to satiate their appetites. The goal of this project is to have a thriving colony of both invertebrates and grasses, with a diverse array of invertebrates of varying sizes consistently available for the amphibian collection, thereby eliminating the need to import non-native insects or to collect wild ones.

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A community health project aids biodiversity conservation in Papua New Guinea

Scott's tree kangaroo, or tenkile (*Dendrolagus scottae*), is the most threatened of all tree kangaroo species. This charis-