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# RHINOS, WHIRLYBIRDS AND M99

By N. J. RUSSELL

WITH THE UGLIEST FACE in the animal kingdom and a truculent disposition, the black rhinoceros literally has a nose for trouble. It is the rhino's horn that has made this huge animal a prime target for poachers and has put the black rhinoceros high on the list of animals in danger of extinction. Rhino horn consists of compacted fibers, somewhat like hairs.

The rhino is a victim of ancient superstition. Many aging gentlemen in the Far East still believe that rhino horn is the basic ingredient for elixirs reputed to revive flagging sexual potency. As a result staggering sums are paid for rhino horn. Where there is demand there

will be supply, and this law of economics filters back to the hunting tribes of East Africa, the last great stronghold of the black rhino.

Rhino poaching, that is, illegally killing the animals for their horns, is a lucrative source of income for some of the tribes. Since the crime takes place in thick bush miles from anywhere, it is difficult to prevent or even to control. And since rhino horn, unlike ivory, does not lose its value by being cut into portable pieces, it is just as difficult to catch the middleman who fences the horn to the agents at East Africa's ports.

The Kenya Game Department has evolved a battle plan to save the rhino. First authorities banned hunting and trapping of rhino except in one small area where safaris are restricted either to foot or horseback.

At the same time, game officials marshalled a powerful array of resources — advanced veterinary knowledge, improved techniques of

Head-on, Africa's black rhinoceros is the picture of truculence and power. A formidable foe, the black rhinoceros is nevertheless easy prey to poachers armed with modern weapons. Kenya authorities are taking steps to preserve it.

handling and using the immobilizing narcotic compound M99 and a pair of skilled helicopter pilots and their aircraft.

When extensive poaching is reported in an area, the Game Department moves in. One of the helicopters churns through the air seeking rhinos. Once a rhino is spotted, a drug-bearing dart is fired from the whirlybird. The massive pachyderm, drugged, is carted out of the thick bush by lorry and, after a rest period, transferred to the comparative safety of a national park.

It sounds simple, but it has taken years of trial and error to coordinate the program to the point where, on a recent operation, the game agency rescued 18 rhinos in six days.

Darting the black rhino started in the early 1960's, when the Game Department's capture unit was led by Mr. Nick Carter, who is now in South Africa. He, through trial and error, provided much of the groundwork later built upon by the next leader, Mr. Barrie Chapple, who was killed in an air crash while spotting rhinos, and the unit's present leader, Dr. John King, who has brought darting to a fine art. On loan from the British Government, Dr. King is a young Ph.D. as much at home in thick bush as he is discussing the finer points of veterinary technique. A qualified veterinary surgeon, he has learned his bushcraft from his fellow game wardens. His advanced veterinary knowledge provides the answers to the how, why and wherefore of studying the animals in the wild and under sedation, and in perfecting the "after-care" so necessary if the darted rhinos are to survive capture.

Over a period of two years in the Kenya bush, Dr. King has perfected the use of M99 against the black rhino. One of the major problems was to ensure that the dart carrying the drug penetrated the rhino's thick hide with just enough power to make it stick but not so much that the dart would bounce out again. He redesigned a dart which has a steel needle with the hole in the side of the stem to prevent it from clogging as it penetrates the hide. The dart also has a small barb to stop bounce.

The method of accurately firing the dart has also progressed from the early "crossbow days" to the use of a highly efficient large-bore rifle

and cartridge which is 95 per cent accurate at distances up to 25 yards.

Efficient darts would be of little use, however, without the immobilizing agent M99. Previous compounds used to capture antelope would require a much larger volume of drug if used on rhinos — and it would be difficult to pack that much compound into one dart. Many immobilizing drugs also demand sure-fire judgment of an animal's weight before use.

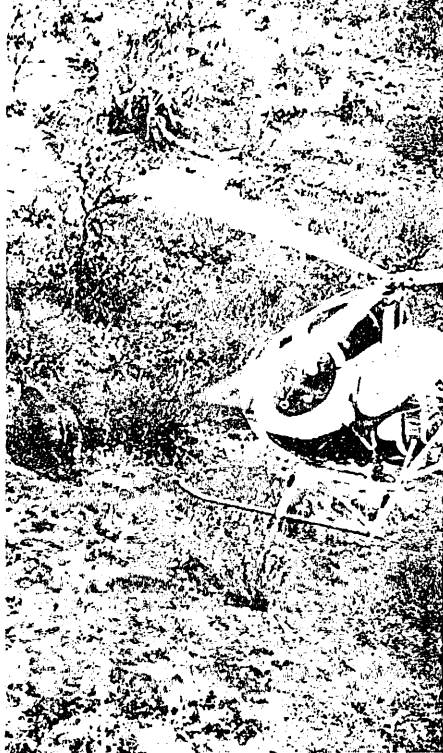
The black rhino is not likely to oblige the hunter by waiting patiently for its weight to be assessed in the middle of thick, thorny bush country. Hunting from the ground, you normally get a sudden glimpse of either horn or rump, depending on luck. If rhinos sense danger they may run or charge. Therefore, it is almost impossible to accurately guess a rhino's weight, and the animals are so massive that a 10 per cent error is likely.

Fortunately, M99 eliminates the need for such accurate estimation of weight. Knowledge of how to use M99 has reached the stage where Dr. King now carries only two strengths of the compound and two quantities of each strength. A huge bull rhino gets a larger quantity of stronger compound; a calf gets a smaller amount of milder drug. But in a pinch M99 is so flexible that a small cow or a large bull can be darted with the same dose of drug without harm.

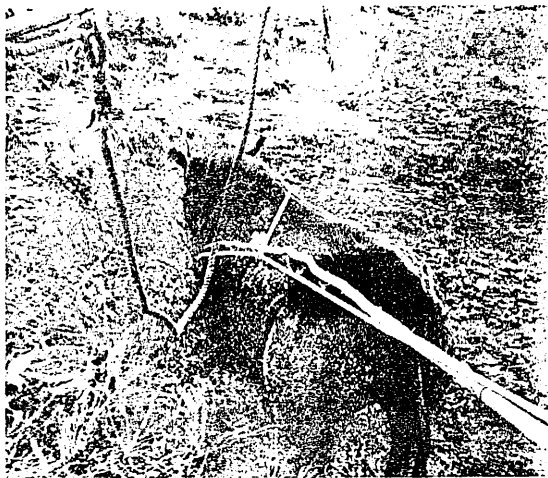
The use of M99, however, would not on its own have brought about the present revolution in rhino-catching without the helicopter.

Tracking rhino in thick bush and forest is a tedious and dangerous job. You need many eyes, half looking for the nearest climbable tree in case of emergency — but in the bush there are often no trees. There are, however, searing heat, intense thirst, and an abundance of dry, brittle scrub-bush which impedes human vision, but not a charging rhino which bulldozes through brush as if it did not exist.

The odds are stacked heavily in the rhino's favor. Its eyes may be poor, but its hearing is acute and sense of smell above normal. Rhino hide is an inch thick in places, impervious to the thorns which snag clothes and vehicles. The rhino can thunder along at 30 miles an



Flushed from the brush by helicopter, a rhino lumbers over the pothole-scarred plain. A drug-bearing dart is fired at the rhino from the helicopter.



As the massive rhino crashes to the ground, trappers go to work in earnest. Moving quickly, they hobble the drugged animal, which is still held by a rope.



hour for a short distance in this kind of country, cut by dry river beds and washways. People on foot in the bush are in great danger of ending up second best to a charging rhino. Even trappers' "catching cars," built for the job, often end up impaled on a tree stump, after a heart-stopping chase across country.

Veteran trappers, with tough years of experience behind them, take an average of a week to catch a rhino by the chase-and-rope method. Often they spend four or five days tracking the animal to get within chasing distance. The helicopter, on the other hand, tips the balance in favor of the trapper. I found this out first hand.

To see the capture unit in action, I worked with it for a week during an operation in the Darajani area, on the banks of the River Athi. Across the river, easily forded during the dry seasons, stretches the northern section of the huge Tsavo East National Park. Unfortunately, endangered rhinos removed from Darajani cannot be relocated in the adjoining park. Rhinos are creatures of habit and extremely local. It would be useless to transfer them across the river, for they would recross it at the first opportunity and return to their old, poacher-ridden home ground.

Trimmed of the need for tracking rhinos from the ground the operation was so smooth as to be a little monotonous. In addition to a helicopter, the field party consisted of a Land-Rover and two large four-wheel-drive lorries, each equipped with a winch and wooden sledge.

A day in the field usually follows a set pattern. At dawn the vehicles move out to a rendezvous in the bush—possibly a hunting area honeycombed by countless winding tracks pounded out of the dust by thousands of animals over the years. The Land-Rover is in contact with the helicopter by radio. Twenty minutes after the vehicles set out, the helicopter carrying the pilot and Dr. King takes off and starts the hunt.

Within minutes the airborne hunters spot a rhino and the radio crackles into life, bringing the vehicles into position. This must be a smooth procedure for a drugged rhino should be hobbled as quickly as possible to prevent

injury in case it blunders into rocks and trees.

With the rhino in sight, the pilot swings his "chopper" in low and to the left of the target's rump, so Dr. King can take careful aim with his dart rifle. If he aims too low the dart may penetrate the skin at an angle so acute that the drug might not work. A dart aimed too high could be snatched up by swirling "dust-devils" which could blow it off target.

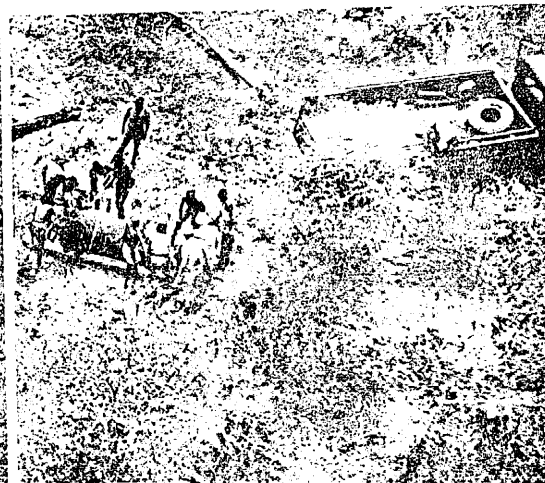
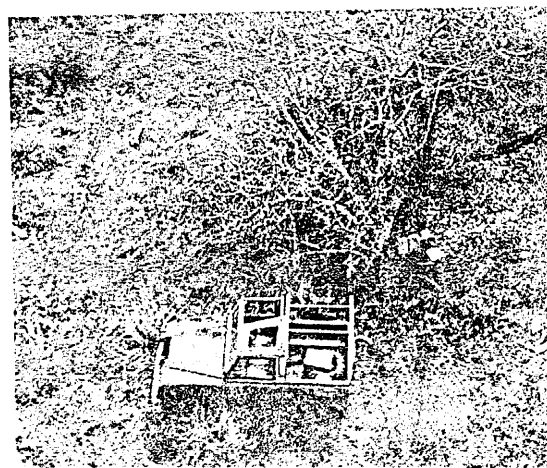
When the moment is right, Dr. King leans out of the helicopter against his safety harness and fires the rifle, sending the dart into the left buttock of the running rhino. The helicopter follows the rhino, while Dr. King watches for the first stagger that tells him the drug is taking effect. Then the vehicles are called in by radio.

It is often easier said than done. From the air, the bush looks thin. Potholes, antbear holes and washaway blend into the earth. But on the ground it can take 10 minutes of lurching and turning to cover 50 yards by vehicle. Even when the trappers reach the point beneath the slowly circling helicopter, the rhino may still be invisible until they are almost on top of it. The wispy-seeming bush has the properties of barbed wire. The rhino, tiny from the air, looms up with massive bulk and a long horn with which it can punch through a metal door.

But the vehicles go in anyway, and if the rhino is already down, it is but a moment's work to securely hobble the animal. Occa-



Dr. John King, leader of the Kenya Game Department's capture unit, checks the breathing of the drugged rhino as other members of the unit rope the animal to a sledge.



In Swahili it's called "pulli-heevi," but no matter what the language, hand-rolling two-plus tons of limp, drugged rhinoceros on to a sledge is just plain hard work.



Viewed from the air, capture unit vehicles and personnel dot the African plain. This photo was taken by the author from one of the helicopters.

sionally the rhino is still on its feet. One rhino walked round and round the assembled vehicles, then between them, unwilling to fold. At last one of the catching-cars crept round behind it. The trappers dropped a noose over the rhino's head and lightly pulled. With a great deal of whatever dignity a sleepy rhino can muster, the huge beast gently keeled over.

Once a rhino is down the work starts. Dr. King lands and checks the animal's respiration. The pulse rate, best taken at the base of the tail, is recorded. Girth at the heart, length, size of feet and horns are then noted — as well as time of darting, time of collapse, and the animal's sex. Half a dose of an antidote for M99 is injected into an ear vein and the rhino's eyes, dilated by the drug, are covered against the sun.

A great deal of what is called in Swahili "pulli-heevi" rolls the rhino onto a wooden sledge which is winched up roller ramps onto a lorry. Securely roped with its head cushioned to prevent damage in transit, the rhino is carted back to camp to be weighed — a

feat of bush engineering involving three spring balances, two blocks and tackle, a lot of manpower and a convenient baobab tree.

With one lorry on its way back to camp, the helicopter is already scouting for another animal. A smooth repeat performance and another later in the day soon fill rhino pens, assembled by the trappers before the darting started. The rhinos rest for at least three days in the pens before they are crated and carried to new homes. This gives Dr. King time to study their behavior, which, in most cases, becomes amenable surprisingly fast.

Because the going is slow over the rough country, the three-hour "sleep" from M99 is often almost over by the time a rhino has been weighed and penned. Then Dr. King and his men wash down the animal with a strong insecticide (rhinos are often tick-infested) and pour healing oil on any open battle scars the rhino may be carrying. This done, and a head-rope attached, Dr. King injects the rest of the antidote.

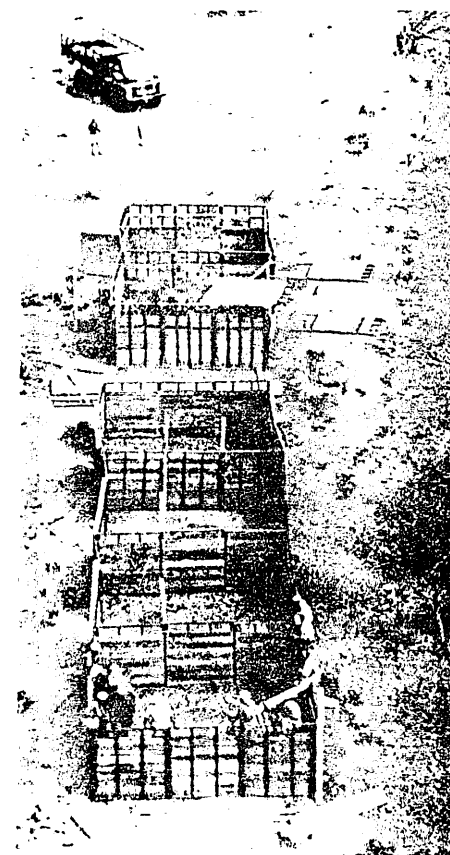
Normally it takes about 10 minutes and a

tottering effort to bring the rhino to its feet. Occasionally, however, it takes only two seconds and a sudden surge. In such a case, members of the unit scurry for the top of the pen.

Once on its feet, a rhino is kept under constant observation, for rhinos have a habit of pushing against the nearest convenient object after awakening. If this happens in a corner of the pen, the rhino's horns can be damaged. The loose end of the headrope is passed along the top of the pen from man to man, and is pulled to keep the rhino away from the corner.

With the mechanics of rhino darting at a highly developed stage, the rescue of Kenya's black rhinoceros population, and the stocking of the national parks with the animals now depends on money available for the program.

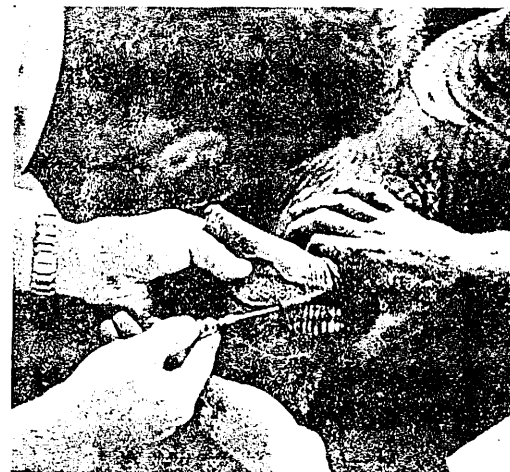
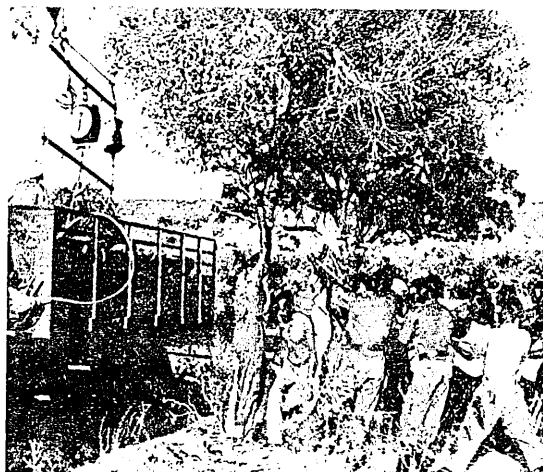
The helicopter is a vital and costly element. There are only two suitable for the job available in Kenya and these cost \$85 an hour to hire, if and when the aircraft are available. The Game Department and the Kenya Government have little money to spare for this



Roped to the sledge, with its eyes covered and head cushioned, the rhino is winched aboard a lorry and transported back to the capture unit's camp. One of the unit's catching-cars is parked in the background.

Aboard the lorry, the rhinoceros is weighed. The men of the capture unit, using blocks and tackle, raise the animal and sledge clear of the lorry's deck. The animal's weight is read by three scales on the lorry.

A half dose of the antidote for the M99 drug is injected into a vein in the rhino's ear shortly after the animal is darted. The remainder of the antidote is administered after the rhino is penned in camp.



Removed from the field, drugged rhinos are placed in these pens built by the capture unit before going into the bush. Rhinos usually awaken after a "sleep" of about three hours. Rhinos are rested before release.

work. The capture unit has been functioning by courtesy of the East African Wildlife Society which buys the helicopter's flying time for this unit. This organization also paid about \$1,500 for the unit's rhino pens.

The helicopter flew about three hours a day in the Darajani operation. The unit rescued three rhinos a day — an average of \$85 per rhino in flying time, a small price for the preservation of a magnificent species.