RHINO WATCH

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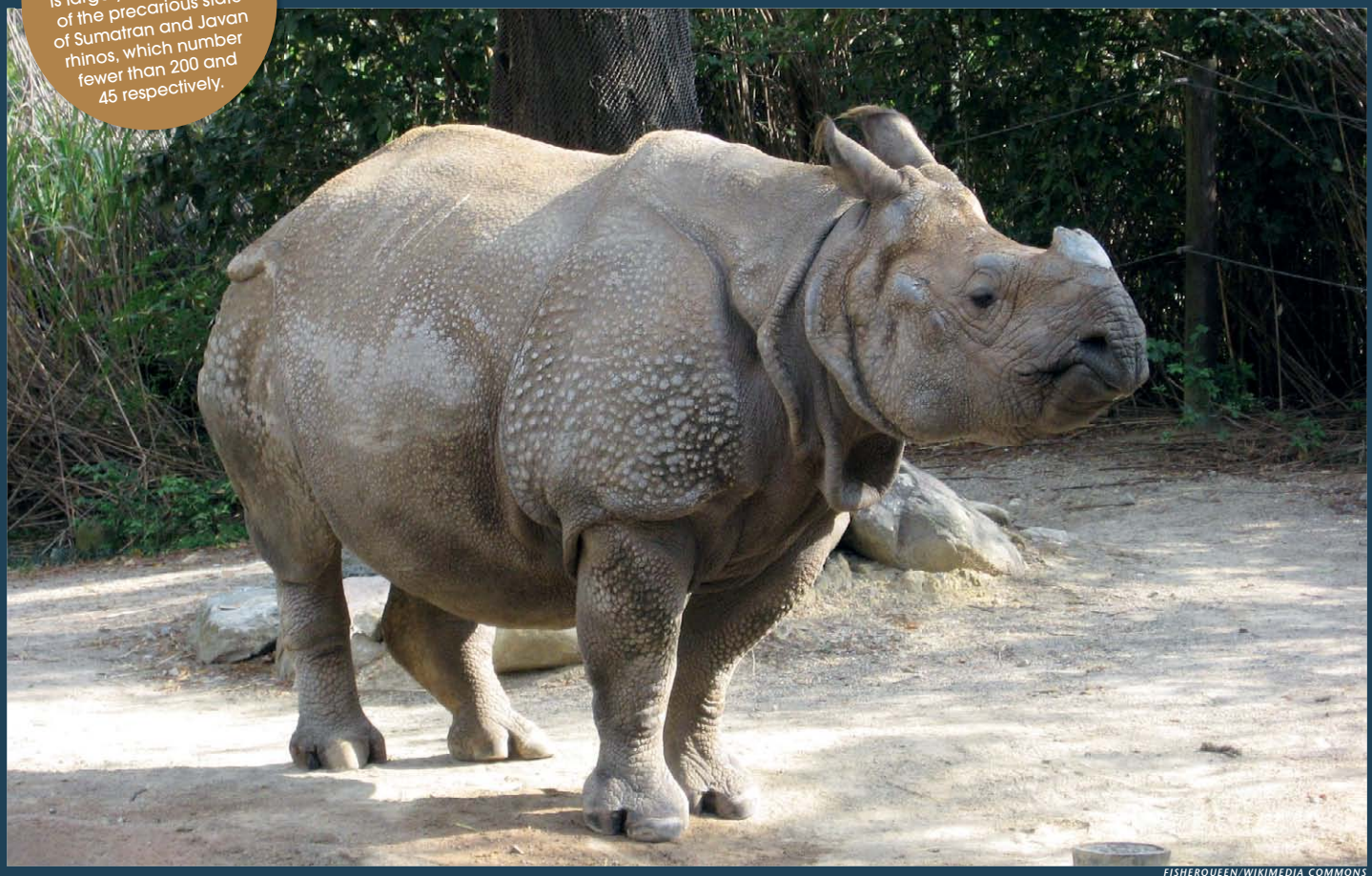
TIM JACKSON

did you know?

2012 has been declared the Year of the Rhino by the IUCN. This is largely in recognition of the precarious state of Sumatran and Javan rhinos, which number fewer than 200 and 45 respectively.



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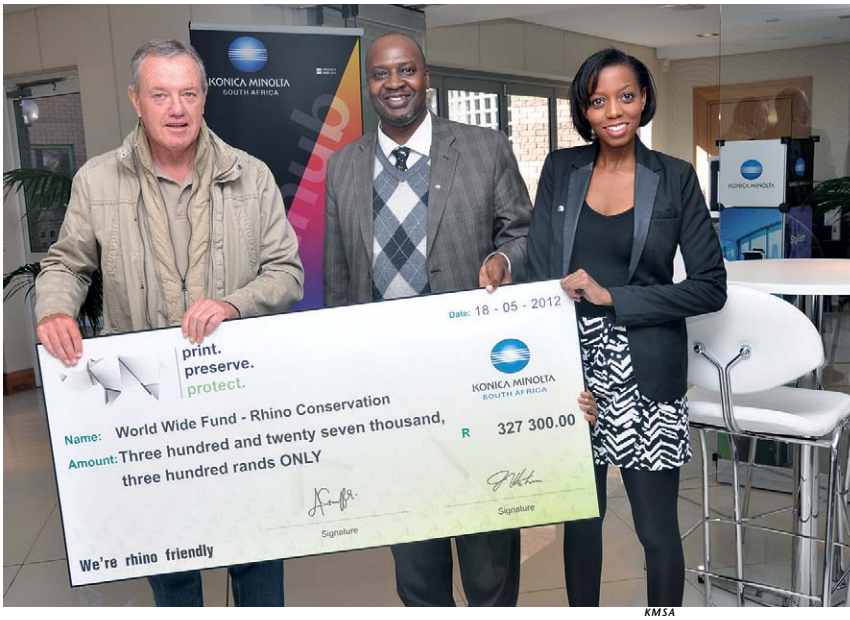
RHODIS ATTRACTS ATTENTION IN ASIA

South Africa's rhino DNA indexing system – RhODIS – is receiving favourable attention from the director-general of Nepal's Department of National Parks and Wildlife Conservation, Krishna Prasad Acharya. Acharya, who also serves on the South Asian Wildlife Enforcement Network, recently met with Joseph Okori, the head of WWF's African Rhino Programme, and emphasised the need for the same process to be adopted across Asia as a way to deal with and reduce wildlife crime.

Nepal, together with India, hosts the world's remaining Indian or greater one-horned rhinos (above), the largest of the five rhinoceros species. Thanks to stringent conservation measures, the total population is estimated to be 2 900 (up from an historical low of fewer than 200 in the early 1900s), but poaching and conflict are serious threats to its future.

RhODIS is based at the Onderstepoort Veterinary Genetics Laboratory at the University of Pretoria. The unit is supported by WWF-South Africa, as well as corporates such as Konica Minolta South Africa, which makes a donation to WWF for every bizhub sold.



KMSA

ABOVE Konica Minolta South Africa MD, Alan Griffith, presents a cheque for R327 300 to Joseph Okori, head of WWF's African Rhino Programme, and Puleng Mosholi of WWF-South Africa.

TOP The Indian or greater one-horned rhino, photographed at Cincinnati Zoo in the US.

SANPARKS

MORE EYES IN THE SKY FOR KRUGER

On 5 June South Africa's Kruger National Park took possession of an Ultra-Light Bantam aircraft that will be used to enhance anti-poaching patrols across the two-million-hectare protected area. The park's managing executive, Abe Sibiya (on the left in the image), also accepted almost R1.4-million (US$160 000) worth of donated equipment from the SANParks Honorary Rangers, who contributed to the operating costs of the aircraft as well.

Some *Africa Geographic* readers have expressed an interest in supporting anti-poaching efforts in the Kruger Park. SANParks Honorary Rangers do a brilliant job – find out more at *www.sanparkshr.org*

RECORD PRICE FOR RHINO

The Zululand Wildlife Forum reports that a record price of R560 000 (US$66 000) was paid for a white rhino at the annual Ezemvelo KZN Wildlife auction at the end of May. Overall, the auction realised R11.8-million (US$1.4 million) for the provincial authority.

All 40 white rhinos on the block were sold, with each fetching an average of R30 000 (US$3 540) more than last year. Speculation about this renewed buoyancy in the private rhino market after several years of falling prices was rife. Was it a sign of confidence in anti-poaching measures or are farmers bolstering their stock in anticipation of some form of legalised rhino horn trade?

Historically, the auction of rhinos has served the dual purpose of raising funds for conservation authorities and keeping breeding rates as high as possible – a good thing for population growth. A fall in the value of rhinos in recent years (many private land owners cannot or are unwilling to stump up for the additional security that rhinos require) hits not only the pockets of the cash-strapped authorities, but compromises the ability of the rhino population to increase.

Speaking at an *Africa Geographic* reader event earlier this year, Hector Magome, head of conservation services at SANParks, said that, as a result of poaching and a perceived lack of buyers, he wasn't sure whether the national conservation authority would auction any rhinos this year at all.

FORCE TO BE RECKONED WITH

Joanne Lapin, Chris Thorpe and their team at Rhino Force make and distribute beaded bracelets, beaded rhino calves and other locally made products, and donate the profits to South African NGO, the Endangered Wildlife Trust (EWT). Not only is Lapin upfront about how and where the funds are managed, but Rhino Force's endeavours create valuable employment for local people and organisations. So far, her group has sold more than 150 000 bracelets, raising about R1.1-million (US$140 000) for EWT.
www.rhinoforce.co.za

HANDS ACROSS THE WATER

At the end May 2012, South Africa's Department of Environmental Affairs (DEA) reported that memoranda of understanding on rhino poaching had been completed between South Africa and Vietnam and China respectively. All that is required now are the signatures of DEA minister Edna Molewa and her counterparts. Speaking at the first National Rhino Conservation Dialogue in Midrand, South Africa, the DEA's Fundisile Mketeni said the department would now turn its attention to Thailand as part of its ongoing efforts to engage with Asian consumer states of rhino horn.

FACTS & FIGURES

(as at 12 June 2012)

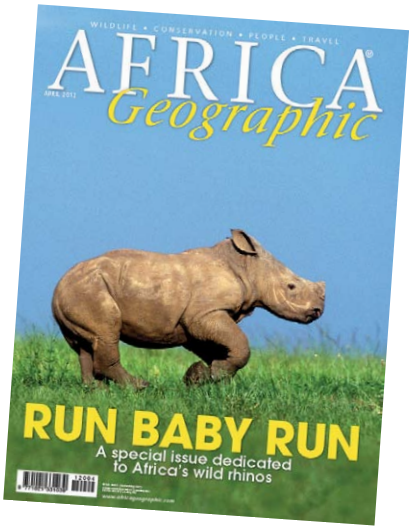
245 rhinos killed in total (▲35 from 7 May 2012)

147 rhinos poached in the Kruger National Park (▲20 from 7 May 2012)

162 arrests made (▲33 from 7 May 2012): 138 poachers; 10 receiver/couriers; 6 couriers/buyers and 7 exporters.

Call **0800 205 005** with tip-offs or to report incidents of rhino poaching.

Source: Department of Environmental Affairs



HOW TO COUNT RHINOS

SARAH BORCHERT GETS THE LOWDOWN ON RHINO POPULATION ESTIMATES.

When *Africa Geographic*'s April issue went on sale earlier this year, we expected a big response. But we were sideswiped by the vitriolic reception to a statement we made regarding rhino populations, namely that they were still increasing despite the current poaching crisis. What ensued, mostly via Facebook, was a questioning of the methods used to assess rhino populations and whether such statements could be justified. I went back to Mike Knight and Richard Emslie, chair and scientific officer respectively for the IUCN SSC African Rhino Specialist Group (AfRSG), the body mandated by CITES to report on African rhinos – and whose figures we quoted – to ask how they compiled them.

'Every two years, estimates for individual rhino populations are submitted to the AfRSG,' explained Emslie. 'After reviewing these figures critically, the AfRSG consolidates that information into one of three categories, depending upon the type of survey undertaken, how recently it was done and the reliability of the data.' These figures are then collated into a total, which is published. (Individual population counts are routinely updated, but are not publicly available for security reasons.)

Estimates of the numbers of rhinos on state land in South Africa were provided by the provincial and conservation authorities using various methods (see box 'Counting methods'). All of these figures were taken from reasonably recent surveys and ongoing monitoring programmes. The quality of population estimates of rhinos on private land was more variable and was based largely on a survey done in 2008 along with information from provincial representatives and landowners.

'It's also worth noting,' added Emslie, 'that whereas the numbers of rhinos in many smaller populations are correct to within one or two animals, the larger populations have what we call a "confidence level", which is expressed as a percentage. Managers usually strive to get estimates to between five and 10 per cent of the true number of rhinos.'

At the end of 2010, then, South Africa's white rhino total was 18796, made up of 16 692 from recent surveys and censuses (good quality counts) and 2 104 in the 'probable' (slightly less reliable) category. Another survey of privately owned rhinos is currently under way to try to improve the accuracy of those figures.

Since 1989, managers of the country's black rhino populations have supplied detailed annual reports to the SADC Rhino Management Group, data that have been recognised as amongst the best for any endangered species. At the end of 2010, black rhinos in South Africa numbered 1 915.

When asked about suspicions, again voiced by Facebook users, that the Kruger National Park was overestimating its population, Knight responded unequivocally: 'The idea that SANParks is inflating its figures is nonsense,' he said.

'In fact, the number we used was conservative and based on a less precise survey done in 2010,' Emslie confirmed before explaining how distance sampling as well as thorough helicopter block counts in 2008 both resulted in higher estimates. However, Knight did mention, 'Given the current threats posed to white rhinos and the need to regularly update figures, SANParks will be undertaking block counts later this year.'

'It's important to emphasise too how difficult it is to count every animal,' said Emslie, 'especially if you have large numbers over a very big area. People tend to think that you just hop into a helicopter and count them, but tree canopies and thick bush make it easy to miss individuals when doing simple aerial strip counts.'

With regard to the idea that populations are still growing despite the poaching, Knight was equally clear. 'We know that the white and black rhino populations in South Africa had a net growth of 6.9 per cent per year from 1991 to 2010, despite the 2.2 per cent loss to poaching. So the current wave of poaching is eating into our "profit",' he explained.

In other words, at the start of 2011, South Africa had a total of 20700 rhinos. An average growth rate of 6.9 per cent would produce 1428 calves, but with the loss of 448 rhinos (or 2.2 per cent) in 2011 to poaching, we are left with an increase of 980. 'The crisis,' concluded Emslie, 'is happening because rhino poaching has *escalated* at such an alarming rate. If the current rate of increase continues, populations could go into decline by 2018.' **AG**

COUNTING METHODS

There are many ways to count rhinos. Here are just a few that contributed to the estimates published by the AfRSG.

Individual identification The best way to monitor most rhino populations. Many individual rhinos are identifiable to rangers by their ear-notch patterns or by the marks made during captures. Ongoing sighting information provided by rangers is then used to produce population estimates.

Aerial counts (Used to count white rhinos.) Strips of a set width are defined and individual animals within a strip are counted. A technique called 'distance sampling' produces the best results (it allows for the increasing number of rhinos that are missed when you penetrate further into the strip). The estimated densities are then extrapolated to gain a population estimate.

Foot-based line and point transect distance estimation Distance sampling-based foot surveys are used to estimate the size of South Africa's second-largest white rhino population (in Hluhluwe–iMfolozi Park).

Helicopter block counts The best technique for surveying large populations or very large protected areas that have fewer rangers (rendering ID-based methods impractical). The study area is divided into a grid and a number of squares are chosen at random and studied. Using a helicopter and flying in concentric circles, all the rhinos are counted. This produces very good data, which are then employed to estimate a total figure for the entire study area.