

SPOTLIGHT ON Sumatra

Flat as a pancake, the farmland stretches on for mile after eye-stretching mile – a fertile patchwork of dykes and rich, tilled soils. Then, abruptly, it stops at a wall of jungle. This is the Way Kambas National Park in southern Sumatra.

Beyond the first, dense crush of trees is a tangle of virtually impenetrable undergrowth mixed in with a mosaic of grassland and inaccessible swamps. The air is thick and damp, the humidity often touching 90 per cent.

Until a year ago, little was known about exactly what lives within the hidden world of Way Kambas. And what was known didn't bode well for its wildlife. Surrounded by a dead-flat landscape, it is the closest reserve to the teeming, steamy mega-city of Jakarta. It has also been heavily logged. Most of the jungle is now regrown 'secondary' forest. Only the swampy heartlands have been unaffected by logging, left to conceal their mysteries intact.

Previous studies had reported that perhaps 20 highly endangered Sumatran tigers and a tiny remnant of the secretive Sumatran rhino might have survived within the boundaries of the reserve. But questions of where the tigers, in particular, live and how many there might be remained unanswered until July 1995 when Dwiatmo Siswomartono, the Indonesian government's director for Nature, Flora and Fauna

Hidden and unsuspected in their Far-Eastern jungle refuge, tigers and rhinos are among the mammals that have snapped their self-portraits and shone a new light on the nature of Indonesia. In part 1 of his report, Mark Bristow reveals all.

Conservation, invited a small Indonesian tiger project to study the reserve.

The multinational research team started its investigation on the simple premise that the best way to see wildlife is not to be there. After cutting narrow tracks through the jungle, they mounted between 30 and 40 waterproof cameras, each triggered by interrupted infra-red beams, in a study area covering 1,000 hectares, a tenth of the reserve. Setting the cameras up sounds easier than it was. It took two frustrating months to align the cameras to work despite harassment from raindrops (which fell) and undergrowth (which inconveniently moved). It then became a matter of wait and see.

And what they've seen has proved well worth the wait. The hidden cameras have revealed a remarkable wildlife treasure trove seemingly untouched by poachers and

unscathed by loggers.

The tiger project quickly located a number of Sumatran tigers, including individuals identified by the names Gembong Rahwana, translated as 'The big bad boss who lives in the deep dark forest', and Cincin Emas, or 'Golden ring'.

Using a satellite global positioning system, which locates each tiger sighting on a computerised map to an accuracy of 30 metres, the team has already identified 12 Sumatran tigers in its study area alone. Based on this evidence, Neil Franklin, the project's tiger ecology coordinator, now believes there are "many more" tigers in Way Kambas than previously thought.

Curiously – and somewhat disconcertingly – the researchers have also discovered that the



◆ Burning bright. Gembong Rahwana – the 'big bad boss' of Way Kambas – reveals himself in the forest of the night.



same tigers often reappear on camera shortly after a film is retrieved, suggesting that they're uncannily well aware of the team members and like to keep a close eye on their movements.

While tigers are the project's main subject,

their cameras aren't, of course, species-specific. They don't think, "tiger," and shoot. They go off when anything trips the infra-red beam, be it a bull elephant or a barking deer.

Consequently, the cameras have unwittingly revealed just how unexpectedly rich and abundant the array of wildlife within Way

Kambas really is, contradicting the perceived wisdom that primary forest is naturally home to the richest diversity of species, and regrown secondary forest, a very poor second best.

"There are pigs everywhere," says Neil Franklin. "Barking deer, sambar, mouse deer – a bite sized snack for a tiger – long-tailed macaques, pig-tailed macaques and loads of tapirs. There are also an awful lot of sun bears. I recently saw two sun bears 25 metres up a tree taking great swipes at each other. One knocked his opponent off and he fell to the ground with an almighty thud."

It is not only prey species which abound.

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There are large numbers of wild Asian elephants, which have accounted for the 15 cameras knocked down and the five smashed flat.

"Some of the elephants go berserk when they see a flash," says Franklin. "They're the ones which are used to farmers throwing fire crackers at them to stop them going into the crops. They're quite a problem."

The cameras which have survived the attentions of enraged elephants, have also photographed civets: banded civets, the elusive otter civet and 'red civets' – a local variation of the masked palm civet – not to mention leopard cats, marbled cats and fishing cats, and a flat-headed cat and a yellow-throated marten, both captured on film in the wild for the first time ever.

Success for the project has already been assured by its early findings, winning strong backing from project collaborator Jansen Manansang of Taman Safari Indonesia, and the Indonesian government.

"We strongly support the project," says Dwiatmo Siswomartono. "It is providing firm information about wild tigers and other species which is helping us define the largely uncharted biological diversity of Indonesia."

But one of the biggest, most unexpected bonuses to the understanding of Sumatra's uncharted biological diversity has come in the form of the first photographs since 1932 of the Sumatran rhino in the wild (see part 2, overleaf). The survival of a viable breeding pocket so

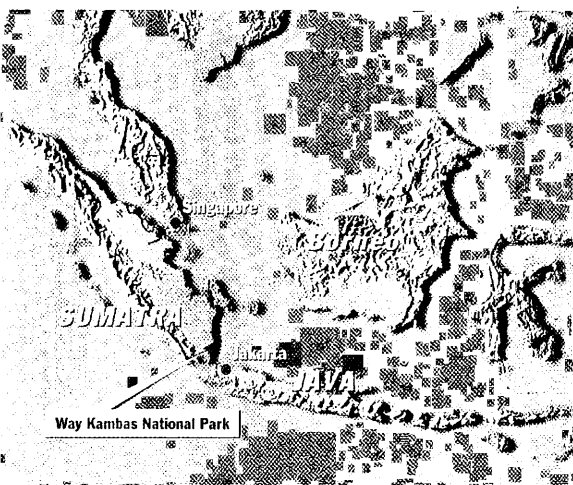


Tripping the light fantastic. Even civets – smallish, nocturnal, secretive carnivores, restricted to dwindling tropical forests – can't duck the beam. Putting themselves in the picture, from left to right: banded palm civet *Homogalus derbyanus*, Malaysian civet *Viverra zanzibarica* and other civet *Cynogale bennetti*.

close to Jakarta in the swamps of a heavily logged nature reserve will be of exceptional interest to rhino conservationists.

For the Sumatran Tiger Project, work continues apace. This year, they plan to start fitting radio-collars to tigers of different ages and sex, to try to identify their territorial ranges and track their movements in the hope that Way Kambas will reveal yet more of its secrets.

For project director Ron Tilson, the results so far have already suggested that logged secondary forest may encourage diversity of both vegetation and prey species – in other words, that regrown secondary forest (often recolonised from primary forest) can be a viable ecosystem (though nobody would suggest that the ideal is other than primary) – and he promises more revelations in the



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collaboration of charities and business.

INFORMATION Ron Tilson, Director, Sumatran Tiger Project, Minnesota Zoo, 13000 Zoo Boulevard, Apple Valley, Minnesota 55124, USA.

coming months. "It just seems that every week, the field team discovers something new. When they are done, I believe the natural history of tigers will be redefined."

◆ The Sumatran tiger is the smallest of the five remaining subspecies of tiger. There are perhaps 400–500 left in the wild.

◆ The Sumatran Tiger Project – Proyek Penyelamatan Harimau Sumatera – is funded by Save the Tiger Fund, a

The rhino's return

Where better to base a rhino-release scheme than the reserve where wild Sumatran rhinos have just been photographed for the first time in decades?

Mark Bristow reviews the pros and cons.

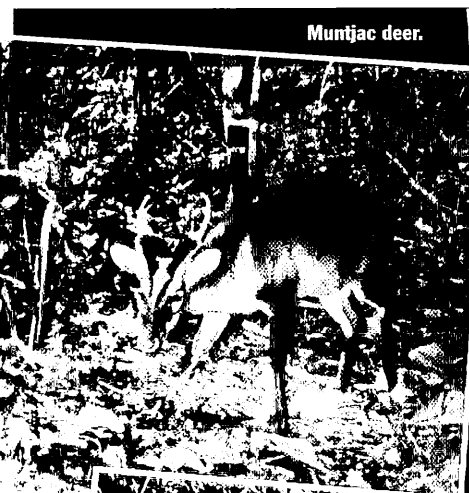
Not far from where the tiger researchers work at Way Kambas, you can hear the groan and rumble of bulldozers. They're clearing strips of the reserve and helping dig fence posts for a £1 million breeding and ecotourism reserve for Sumatran rhinos which are due to be repatriated from zoos around the world.

The ambitious but increasingly controversial scheme is, on the surface, a direct consequence of the failure of zoos to breed the rhino anywhere in captivity. Once work on the sanctuary is completed, captive Sumatran rhinos from zoos in Indonesia, North America and Britain are likely to be relocated to Way Kambas. If all goes according to plan, the southern Sumatran sanctuary will then become the primary captive-breeding centre for the rhino, surrounded by a park which may also hold one of the largest wild populations of the animal.

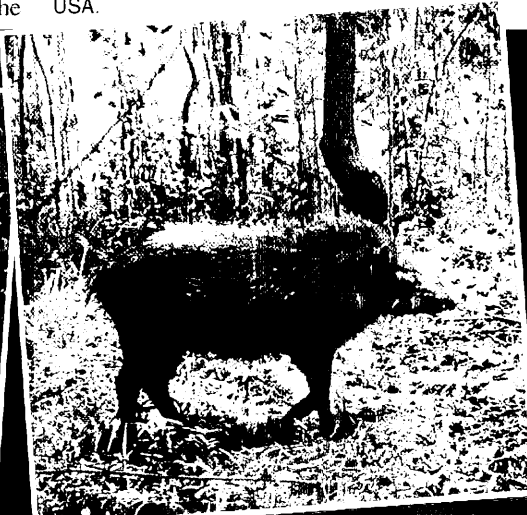
Ultimately, the aim is for the sanctuary to become self-sufficient, funding itself through elephant-back safaris into a "conservation and tourist concession" covering 100 square kilometres of the 1,300-square-kilometre reserve. This plan, in itself, has already provoked controversy. The launch of tourist safaris has been delayed until next summer, and it is believed the Indonesian backer of the scheme has threatened to pull out.

Tom Foose, programme director of the International Rhino Federation, says that one male Sumatran rhino from the UK and five other animals – two males and three females – from Indonesian zoos will probably be the first evacuees. They'll possibly be followed by three animals from Cincinnati Zoo in the US, which are first being moved to the Whiteoaks Conservation Center in Florida to see if they'll breed there.

Mike Lockyer, manager of John Aspinall's Port Lympne Wild Animal Park in Kent, UK, confirmed that the zoo has agreed, in principle, to send its lone male rhino 'Torgamba' to Way Kambas, following the death of its only female from a uterine tumour. "From the



◆ Muntjac deer.



◆ Wild pig.



◆ Asian elephant.



beginning, we'd held a pair that had no chance of breeding. I don't think there's any doubt that Torgamba will now go out there, as long as we're satisfied with the project," said Lockyer.

When it is finished, the Way Kambas sanctuary will be "a managed breeding centre in native habitat covering 200ha," according to Foose. It is designed "like a wagon wheel" with slices of the wheel for every rhino.

"Each animal will be rotated within two enclosures of 10ha each, with a central area for interchange." The enclosures will be divided by

high-voltage electric wire set in front of steel-cable fencing. Males and females will be segregated and allowed into the central salt-lick area only by sequence or when females are in oestrus.

Start-up costs for the first three years will amount to £1.1 million. This will pay for construction works, staff costs and anti-poacher patrols, but won't be enough to keep the sanctuary running after 1999.

To generate more cash, the sanctuary is aiming to run elephant-back rhino safaris for

"high-income-earners." Tourists will stay in what's being called the Way Kanan Camp – a series of lodges and cottages to be built on the edge of the reserve. They'll then travel by elephant through the reserve to the captive rhino sanctuary.

The ecotourism scheme has already entered choppy waters, with allegations that local Indonesians were not being properly consulted. It won't now be launched until the end of the summer, "when the concept is more fully developed," says Tom Foose. ■

Rhinos at home – and abroad

Hairy, two-horned and notoriously shy. Sumatran rhinos are not the world's rarest rhino, but they're probably the most endangered. Though there are perhaps 500 left in the wild – more than the Javan rhino – the population has crashed by 50 per cent in the past decade and remains unstable thanks to poaching.

Captive-breeding, once seen as a way of securing the future of the rhino, has been wholly unsuccessful. Of the 39 sent to zoos, 18 have died and none has bred. No one understands quite why, though three reasons have been suggested:

- the failure of zoos to provide the exact nutritional balance found in the rhino's native habitat;
- the small size of captive



enclosures – wild rhinos typically inhabit a home range of 10 square kilometres;

- and exposure to intense sunlight in zoos, which may stress these deep-forest animals.

◆ The Sumatran Rhino Sanctuary is a collaborative project mounted by the International Rhino Foundation, the Indonesian Government and Taman Safari Indonesia, which is intended to act as an operation company for the sanctuary. The project is supported by Australian and US zoos, the Sumatran Rhino Trust and the European Union.

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