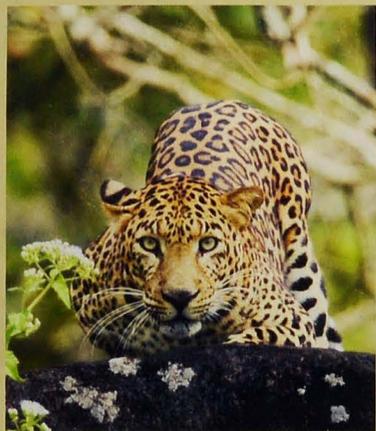


# Call of the wild Sanctuary.

A S I A

Vol. XXIX No. 1, February 2009



## On the cover

The leopard *Panthera pardus* is being wiped out by humans even faster than the tiger. It is an instinctive survivor, but how much longer can it possibly hold on?

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## Conservation

**Not Ours Alone!** Almost every wilderness in India is threatened by false notions of development. Leopards and tigers are therefore sliding towards the abyss of extinction, even as human-animal conflicts are rising. It is ironic that politicians and developers seek to improve the human condition by dismantling the very web of life that ensures the planet's survival, write **Bittu Sahgal** and **Lakshmy Raman** who ask that the war against nature be stopped. **20**

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**Wild Buffalo – Last Hope?** Kishor Rithe and Dr. Bivash Pandav travelled to Sitanadi and Udanti in Chattisgarh to find out for themselves whether or not the wild buffalo in central India can be saved. **38**

## Field Reports

**The Pheasant Sings Once More** The Western Tragopan, Himalayan Monal and Koklass Pheasant populations are making a tentative recovery in the Great Himalayan National Park, writes **Jennie R. B. Miller**. **46**

**Jaldapara – Resurrection in Bengal** Though Jaldapara's rhinos are doing well thanks to sensible management practices, vital corridors with the Buxa Tiger Reserve and Bhutan must be revived, writes **Dr. A. J. T. Johnsingh**. **50**

## Destinations

**Saving all the Pieces** The story of the rediscovery of the rice rat in the Galapagos emphasises the survival challenges mounted on these and other animals in the islands by the arrival of human-driven pressures. **Marilyn Hoyt** travelled to the islands made famous by Darwin to learn more about these native rats and their future survival. **58**

**Tarkarli** This beautiful coastal paradise is a jewel in Maharashtra's crown, writes **Swati Hingorani**. **67**

# Jaldapara

## Resurrection in Bengal

by Dr. A. J. T. Johnsingh

The author who works with the Nature Conservation Foundation, Mysore and WWF-India has spent a lifetime protecting large, endangered animals and writes here about the efforts to resurrect Jaldapara in West Bengal, which have resulted in a relatively secure population of rhinos.

A mother rhino and her sub-adult calf wallowed in a muddy pool, oblivious to our approach on elephant back. Mud baths help rhinos escape the heat of the day, and the biting flies, but this was dawn on April 28, 2008 and it was an unusual hour to see them wallowing. Our mahout recognised the mother by the distinctive cut on her left ear and chose to stay his distance because he knew the animal, as most rhino mothers are, to be skittish and said that she was prone to charging and even nipping riding elephants with her sharp, lower incisor tusks. At close quarters, the mother's ribcage and backbone were visible indicating that she was in a weakened condition. Bringing up a calf is a taxing proposition as female rhinos are responsible for their young ones for as long as three years.

The stillness of the morning was broken by bird calls. As we moved on, I heard the mournful *pee-ow, pee-ow* call of the peacock, the crowing of the Red Jungle Cock – very similar to that of domestic fowl, the raucous scream of the Red-breasted Parakeet, the *hoko hoko* calls of the Indian Cuckoo and the explosive shrieking laugh of the



Kumbhi *Careya arborea* sports large white flowers that offer sustenance to a range of forest creatures ranging from insects and birds to ungulates that will gorge on the fruit.

Stork-billed Kingfisher. As we made our way across the grasslands, both the Lesser and the Greater Coucal revealed themselves to us. An adult male sambar deer had shed its hard antlers and was in velvet and many sambar, male and female, had sore patches on the underside of their necks, a phenomenon commonly observed in South India. Sambar in Central India, Rajasthan and Uttarakhand do not develop such sore patches. Some experts suggest the patches function as scent markers, but their absence in large regions does not support this hypothesis.

I was not looking out for a tiger in the thick forest for that was most unlikely, though it is possible to come across evidence of the striped cats, but I was sure I would see a relatively large number of hog deer, which share the grassland habitat with the rhino. In the event, I saw no hog deer either. Interestingly, a huge herd of almost 80 gaur was sighted, resting peacefully in an expanse of tall grass in the company of a nearby sounder of wild pigs.

### OF TIMES PAST

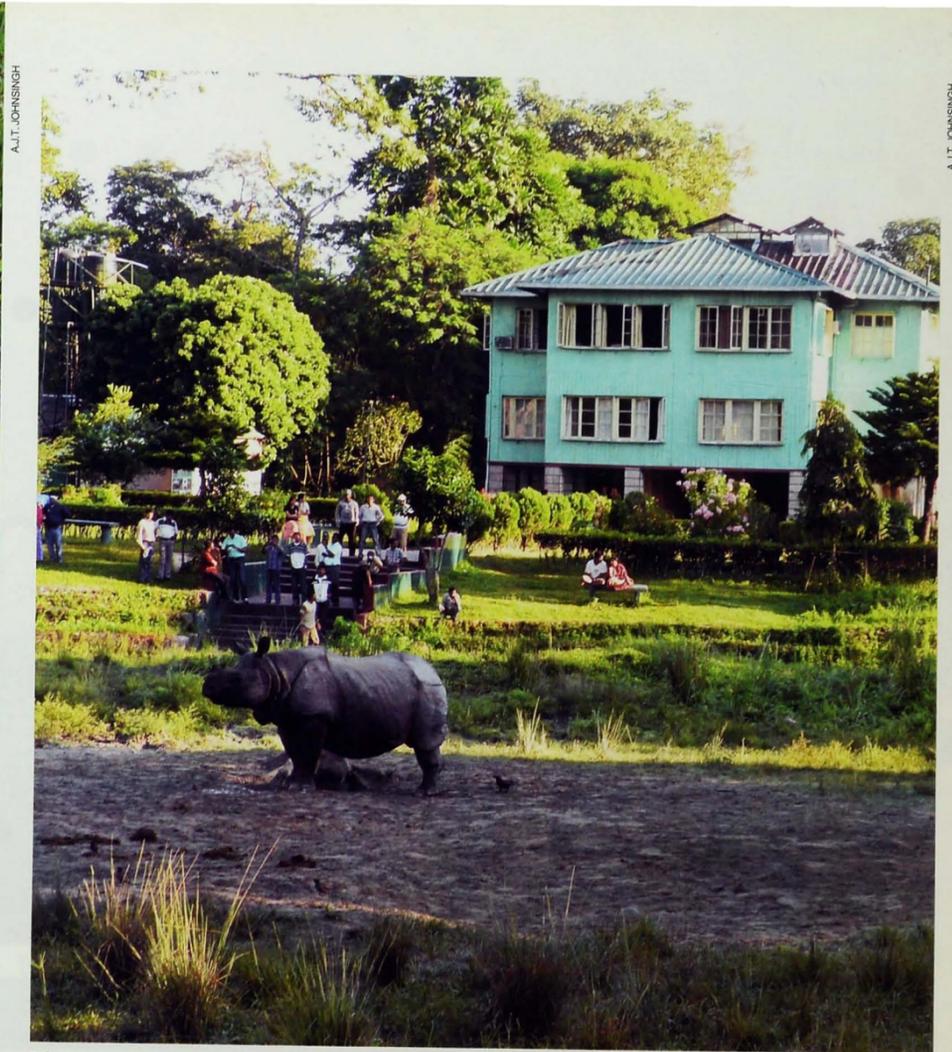
The Jaldapara Wildlife Sanctuary lies in the floodplains of the river Torsa and its tributaries in West Bengal's Jalpaiguri district. The 216.51 sq. km. sanctuary was once part of the Buxa Forest Division and was set aside for timber extraction in 1929. The greater one-horned rhinoceros, now such a rarity, was once widely distributed in the floodplains of the Ganges and Brahmaputra rivers and their tributaries. They used to be well reported all along the *duars* of northern Bengal and reports from the 1920s indicate a population of over 200 rhinos. But over the years, unregulated hunting took its toll and prompted the then government to enact the *Bengal Rhinoceros Preservation Act* in 1932. From then to now,

rhinos have been protected in Jaldapara, which was initially declared as the Torsa Game Reserve in 1932, then elevated to Torsa Game Sanctuary in 1940 and subsequently renamed the Jaldapara Game Sanctuary in 1943. In 1959, the jungles were notified as the Jaldapara Wildlife Sanctuary and protection was further enhanced in 1976 when a 115.53 sq. km. parcel was re-notified under the stringent provisions of the *Wildlife (Protection) Act*, 1972. As late as 1996, an area of 100.98 sq. km. from the Cooch Behar forest block, largely north of National Highway (NH) 31, was added to the odd-shaped sanctuary (which looks like a pair of trousers), with human populations virtually strangling the forest on all sides.

**In 1959, the jungles were notified as the Jaldapara Wildlife Sanctuary and protection was further enhanced in 1976 when a 115.53 sq. km. parcel was re-notified under the stringent provisions of the *Wildlife (Protection) Act*, 1972.**

### A TENTATIVE SUCCESS

Jaldapara is home to just over a 100 rhinos (around four per cent of the global population), which are largely confined to the area south of NH 31, which forms the western boundary of the Buxa-Manas Elephant Reserve. Roughly 10 elephants permanently reside within the sanctuary, but when the monsoons arrive, between 50 and 60 elephants, ranging from Buxa Tiger Reserve, make this their home. Other endangered animals reported are the rare and elusive hispid hare, leopard cat and fishing cat. Leopards are more frequently encountered than tigers. Unfortunately, however, both the swamp deer and wild buffalo have been extinct in the *duars* since the 1960s and the 1970s respectively. The Bengal Florican has also been reported from the sanctuary. A not-so-well-planned re-introduction programme



Seldom is a great Indian one-horned rhinoceros *Rhinoceros unicornis* found far from water. By wallowing in wet mud (left), the rhino fights both heat and parasites. Jaldapara is considered to be the second best refuge for *R. unicornis* after Kaziranga, with around four per cent of the global population. In Jaldapara, visitors are able to observe these prehistoric animals from close quarters (above), especially in the Holong forest area.



A Changeable Hawk Eagle *Spizaetus cirrhatus* descends on one of the many life-giving rivulets that dot Jaldapara. The Torsa river originates in China and drains the sanctuary before joining the Jamuna en route to the Bay of Bengal.

of swamp deer from Lucknow zoo is in place since 1998. Ideally, swamp deer for reintroduction in Jaldapara should have come from the wild, either from the Manas or Kaziranga Tiger Reserves as the captive deer could bring in diseases. What is more, the present enclosure in Jaldapara does not include any marshy areas, which are vital for swamp deer.

Given the human disturbance that it suffers, that Jaldapara is even able to sustain large mammals such as the elephant, rhino, gaur and sambar is nothing short of remarkable. The credit for this must go to the West Bengal Forest Department, which has somehow managed to keep conservation efforts going in the face of human disturbance from two villages populated by around 500 people and 600 cattle. Within a five kilometre buffer, another 32 villages exist, comprising around 100,000 people and 80,000 cattle. I discussed this seemingly impossible situation with S. S. Bist, while he was West Bengal's Chief Wildlife Warden (he was the Director of Project Elephant between 2000 and 2005). When I asked if there were plans to relocate villages from within Jaldapara, Bist replied that no such proposals were on record, and with humility added that the relationship of locals with the Forest Department was good and that the 26 Eco-development and Forest Protection Committees, which had been formed had helped the department to curb illegal activities including poaching.

### OVERCOMING HURDLES

Rhinos are poached across Asia for the supposed medicinal properties of their horns. In response, rhino range states have been forced to respond with shoot at sight orders, but in Jaldapara the primary effort has been to prevent poaching. And when incidents have taken place, the success rate in apprehending the culprits has been quite high. Disease is another critical issue for Jaldapara thanks to the thousands of domestic animals living cheek by jowl with wild herbivores. In response, a massive cattle immunisation drive has been undertaken to protect wild ungulates against foot and mouth disease and anthrax.

When a wildlife sanctuary is established, locals are inevitably upset by curbs placed on them for grazing and firewood collection. In Jaldapara, the forest staff have done all they can to ensure that these problems are mitigated by ensuring job opportunities through tourism and other



forest-related works including road repair, fire-line cutting and even the protection of rhino on the periphery of the sanctuary.

Using a map of Jaldapara, Bist explained how eight ranges had been demarcated and three staff members are deployed for protection in every four sq. km. segment. This staff-area protection ratio is probably the highest in Asia and is a key reason for the success of Jaldapara. Another key to the survival of the rhino here, against all odds, is habitat management, which has been augmented by the selective plantation of native forage species including *Sacharum spontaneum*, *S. arundinaceum*, *Themeda arundinacea* and *Alpinia nigra*. A forage tree that is common in the sanctuary's woodland area is *Caryea arborea* and all ungulates feed on the large, green, fibrous fallen fruit of this tree.

### PROTECTING THE FUTURE

After spending a lifetime protecting wildlife, I automatically go into planning mode when I visit a potential wilderness, to see how things can be improved. In Jaldapara, clearly the roughly 100 sq. km. area north of NH 31 cries out for connectivity with the Bhutan hills. This could so easily be achieved by relocating one village, Ballaguri, which has around 300 families living in a five kilometre parcel of forest land in the Lankapara Range. Such relocations need not be traumatic for the villagers, provided political wisdom and social justice is combined with financial support from the Central Government, State Government and supportive donors. Many villagers have stated that they would actually like to move closer to highways and markets. If this happens, a hugely productive wilderness enclave, where the Holong river originates, could turn into a safe haven for a population of reintroduced rhinos, swamp deer and hog deer, which were once abundant here. Some management efforts, for instance the removal of an unpalatable fern, *Christella dentata*, from the southern part of the sanctuary, together with *Mikania scandens*, would greatly enhance the carrying capacity of the sanctuary for wild ungulates and, consequently, for predators.

The shifting of the Torsa river to the eastern leg of the sanctuary in the monsoon of 1968 resulted in the gradual desiccation of the western leg and its conversion into unsuitable habitat for rhinos. The best way to revitalise this habitat would be to recharge the *mullabs* here with water drawn using gravity, from the adjacent perennial streams and rivers. The National Highway 31 which bisects the northern and the southern aspects of the sanctuary between the Holong and Torsa rivers results in numerous road kills, and urgently a series of speed breakers must be constructed, as has been done on NH 37 in



Illegal activities such as sand and boulder mining (above) harm river ecosystems. Degraded river banks lead to erosion and an altered hydrology. Eventually such activities will harm the wildlife in the area. Jaldapara's continuity (top) with the Buxa Tiger Reserve and with forests in Bhutan benefits many large mammals including tigers, elephants, great Indian one-horned rhinos, gaur and hog deer. But these corridors linking the park to Buxa and Bhutan are under severe biotic pressure.

Kaziranga. The forests on both sides of this five kilometre stretch are in better condition as there is no human habitation in the area. Large mammals are regularly sighted here.

The small size of the sanctuary, lack of suitable habitat (hilly terrain, large patches of wet tall grass habitat and patches of dense jungle) and low density of prey (gaur, sambar, hog deer, chital, wild pig) suggest that the sanctuary would only be able to support a very, very small number of tigers—less than five. Observations suggest that tigers are able to move into the adjoining Chilapata and Kodalbasty ranges of the Cooch-Bihar forest division. There is a great likelihood of tigers becoming locally extinct here, unless the area is connected with Bhutan and the Buxa Tiger Reserve by functional corridors. Gaur in north Bengal, as in many other parts of India, seem to be making a comeback, but the future of tigers in Jaldapara, particularly, is very fragile. Apart from all the recognised problems, the species must contend

with inbreeding and cub mortality at the hands of snakes and other predators. A Sariska-like situation is a distinct possibility as the determined and well-equipped poaching gangs can be remarkably inventive.

The direction is clear. We must somehow institute joint management between Jaldapara, the Buxa Tiger Reserve and Bhutan to the advantage of all three forest areas. The current corridor with Buxa (Nimat Range) to the east is across the Chilapata Range and is under heavy biotic pressure from humans in and around the Dohamani and Nimati tea gardens. This is certainly not conducive to tigers. Systematic monitoring, an infusion of resources and an effort to win the support of locals by offering them decidedly better opportunities away from large animal habitats could help secure Jaldapara. A detailed scientific project to establish the tiger density and breeding status could kick start the process. ♀