



(Picture courtesy: Orissadiary.com)

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The Black Tiger

The increased sightings of black tigers is not a cause for celebration but gives an ominous message that inbreeding depression is putting the existence of the already highly endangered Royal Bengal Tigers at stake.

In the early 1970s a black tiger cub was born to a normal coloured tiger couple in the Oklahoma City Zoo. Unfortunately this black cub was killed by its own mother shortly after its birth.

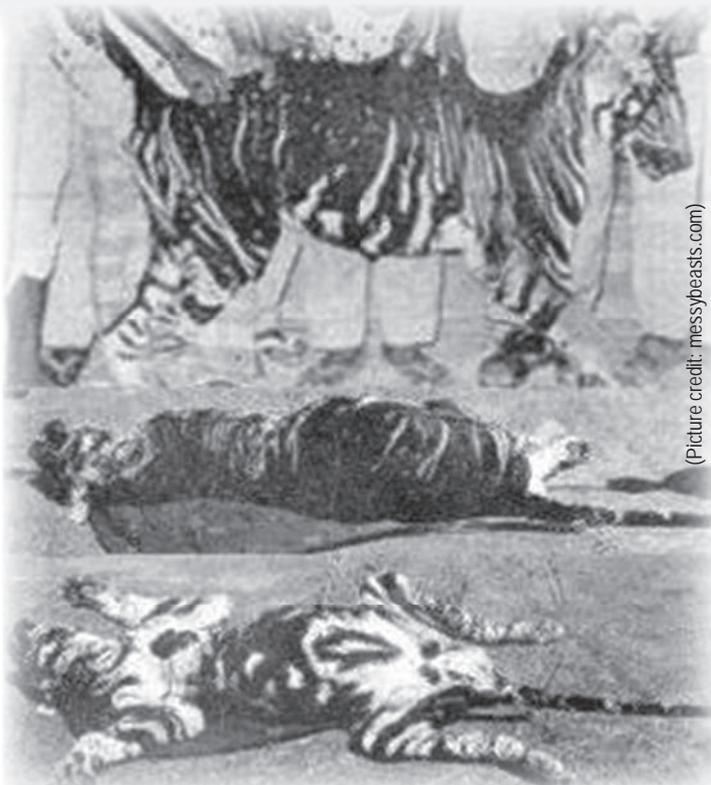
In June 2010, there were reports of the birth of a black tiger cub at Arignar Anna Zoological Park in Chennai. The male cub born to a white tigress had more prominent dark stripes and was hailed as a black tiger. But the Director of the zoo in an email to the author clarified that the tiger cub, who was later christened "Sembian", had a hair coat which had more black stripes than normal white tigers. He was not turning into black as was wrongly reported. Unfortunately this unusual cub died due to infighting with a female.

If white tigers are rare, then black tigers are rarer. Author Hemant Mishra in his work *Bones of the Tiger: Protecting the Man Eaters of Nepal* explains that as is the case with white tigers, the black colour in a tiger is a result of "false melanism" – a process that in the case of black tigers, increases the amount of black pigmentation in the skin.

ORANGE or yellow with dark or black stripes. That is the usual pattern of the coat of the tiger. Most have also seen or at least heard about the white tiger. But ever heard of a black tiger? Well, you will find one in the Nandankanan Biological Park, Bhubaneswar, Odisha.

The night of 27th July 2014 will always be etched in the history of our

country's Zoological gardens. This day a five-year-old white tigress of the Nandankanan Biological Park named "Sneha" gave birth to a litter of four cubs and of these one was black or most probably a melanistic cub. This is the first instance of a birth of a black tiger cub in captivity in our country and the second recorded instance internationally.



The Black tiger cub of Oklahloma zoo that was killed by her mother, is preserved as a curiosity



A normal coloured tiger at the Calcutta Zoo (Picture by author)

The black tiger like the white tiger is an aberration of the Royal Bengal tiger and has no conservation value. It only has a curiosity value and nothing else. The black tiger cub will only increase the footfalls at the Nandankanan Biological Park.

Dr. Lala A.K. Singh, in his paper *Colour Aberration in Tiger: Its biological and conservation implications* offers a more clear explanation: "Normally, the tiger's coat displays a combination of three colours – white, yellow and black. The background colour of the body is controlled by a set of 'agouti' genes and their alleles. 'Tabby genes' and their alleles control stripes. Built within the two series (background and stripe) some genes determine the location-to-location and quantum of expression of three main skin colours – white, yellow and black. The absence of any of these colours or genetic suppression (epistasis) of the effects of genes responsible for their expression leads to colour variation in the tiger."

The various forms of colouration now known in tiger are as follows: 1. Stripeless white; 2. Reduced stripe on white background; 3. 'Lighter' white; 4. 'Darker' white; 5. Golden (pallid), 6. Normal (light yellow); 7. Normal; 8. Normal (deep yellow); 9. Rufous, 10. Brown with dark stripes; 11. Brown without dark stripes; 12. Melanistic; 13. Blue, and 14. Black.

There could have been more aberrations in the colour of the tiger since there is a valid assumption in the fact that

interesting mutations had been wiped out by the trophy hunters before the genes were passed.

Now, why are there now more instances of colour aberration in the tiger population? The answer is recessive (hidden) genes are showing up due to excessive inbreeding caused by habitat destruction of the tigers. The present tiger population roams a smaller area compared to its historic range and due to this there is shortage of mates. This diminishing gene pool is posing a grave threat to the Indian tigers.

A recent research by Welsh scientists has brought to light a shocking fact that the present tiger population in India lacks 93% of DNA which was present in tigers during the British rule! The scientists arrived at this conclusion after comparing genetic data of modern Indian tigers with museum specimens of tigers shot during the British raj and preserved at the Natural History Museum of London.

The territory occupied by tigers has also declined more than 50% during the last three generations and today mating occurs in 7% of its historical territory. The genetic diversity is shrinking and has also become much more subdivided into the small (20-120 individual) populations that

exist today. Their gene pool is not mixing across the subcontinent.

The white tiger population now entirely survives in captivity in Zoos in India and in some international Zoos. Nandankanan Biological Park also holds the Guinness book of world records for having the largest captive population of white tigers which is pegged at 34 specimens.

On the other hand, instances of reporting of black tigers in the wild have increased in the recent past in the eastern parts of our country particularly in Odisha's Similipal Tiger Reserve. Reports of aberrantly coloured tigers started trickling in from the 70s. Beginning in 1975 and 1976, a number of sightings of black tigers occurred. Most of this was ignored as fantasy but an incident on 21 July 1993 brought home the reality.

Dr. L.A.K. Singh cites this incident as follows: "On the 21st July 1993 around 10 am a young melanistic tigress was killed by a boy in 'self defense' with arrows. It occurred in village Podagad in the western periphery of the Similipal Tiger Reserve. The major peculiarity in the body colouration was that on its back the black colour was preponderant. The young tigress had injured '4-5 goats'



(Picture credit: LAK Singh/Dr. J. Marcan)

...skin of an apparently true melanistic black tiger measuring about eight and a half foot was exhibited at the National Museum of Natural History, New Delhi. This skin, whose origin is not known, was seized from a smuggler in October 1992 from South Delhi.

Skin of the black tiger displayed at the National Museum of Natural History in 1992

during the previous one week. Every time it injured a goat the victim was taken away by the villagers. On 20.7.93 night the tigress entered into the cow shed of Sri Surai Besra, 67 years. On hearing some sound Surai went towards the cow shed. The tigress charged at and injured Surai on his face. In the meantime, other members of the family woke up and on shouting the tigress retreated away. The next morning at about 10 am Salku, Surai's son sighted the tigress in the adjoining maize field. The tigress charged towards Salku who ran into his house and from there he aimed at and killed the tigress with three arrows."

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In March 1997, a melanistic tiger was sighted in the Satkoshia Gorge Sanctuary in the former Dhenkanal district in

Odisha. The Hindu of June 4, 2007 reported presence of three black tigers in the Similipal National Park of Odisha during a tiger census using camera traps. Most recently in June 2012 camera traps installed in the same reserve had captured a tiger with stripes darker than usual.

Black Tigers are not a recent phenomenon because there are recorded instances of sightings of black tigers in our country from time to time. But there was a substantial time gap between these sightings. However, many records of sightings of black tigers were ignored as mere exaggeration or flights of fancy; many recorded instances have even been doubted to be actually sightings of a panther (black leopard) due to its similarity in size. Black tigers have been found to be smaller in size than normal coloured tigers and more similar in size to leopards.

The first recorded sighting of a black tiger in our country was done in 1772 when a black tiger was hunted down in Kerala. The *Journal of the Bombay Natural History Society* (JBNHS)

(year 1889 Volume IV) under the Miscellaneous notes column had reprinted Charles Thomas Buckland's article on an account of a man-eater black tiger of Chittagong (then in Bengal state of imperial India and presently in Bangladesh) which had appeared in the journal *The Field*. Buckland happened to be a Civil Servant of Bengal Civil Service and a keen naturalist and having a major role in the foundation of the Calcutta Zoological Gardens in 1875.

In JBNHS Volume 23 Colonel S. Capper reported a very clear sighting of a black tiger on 11 September 1895 in the cardamom hills of South India. Capper and one C.J. Maltby spotted this black tiger through a telescope and saw it disappearing in the forest. In 1913, A.T. Hauxwell wrote in the JBNHS Volume 32 about the black tiger he shot at Bhamo, Burma (presently Myanmar) but unfortunately failed to recover its carcass.

In 1928 a dead black tiger was also reported from Lushai hills, southern Assam. In the same year another black tiger was shot in the erstwhile united province state of British India.

The black tiger like the white tiger is an aberration of the Royal Bengal tiger and has no conservation value. It only has a curiosity value and nothing else. The black tiger cub will only increase the footfalls at the Nandankanan Biological Park. The normal coloured coat of the tiger has been designed by nature to help it hunt by camouflaging it in its surrounding. How can a black tiger or a white tiger hunt in the wild without being easily found out by its prey?

The increased sightings of black tigers is not a cause for celebration but for pondering on the most vital problem that inbreeding depression is putting the very existence of the already highly endangered Royal Bengal Tigers at stake.

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