

**Supplementary Table 1:** Globally recorded historical cases of tuberculosis in black rhinoceros (*Diceros bicornis*) and white rhinoceros (*Ceratotherium simum*) (4–19)

Year of TB diagnosis	Location	Living conditions (captive/ semi-captive/free -ranging)	Additional notes on rhinoceros movements	Species	Age (years) at time of death	Sex	MTBC Species	Key Finding	Place of origin *	Ref (s)
1892	Wroclaw, Poland	Captive (zoo)	... → Travelled with Hagenbeck's Nubian African show for 10 years → Wroclaw, (1888).	Black rhinoceros	≥14	Unknown	Unknown	Died of TB	From wild	(4)
1944	Dresden, Germany	Captive (zoo)	... → Dresden (1928)	Black rhinoceros	≥16	Male	Unknown	Died of TB	From wild East Africa	(4)
1956	Pretoria, South Africa	Captive (zoo)	Mkhuze → NZG (1944)	Black rhinoceros	12-13	Male	Unknown	Died of TB	From wild – Mkhuze, South Africa	(4,5)

1957	Cologne, Germany	Captive (zoo)	... → Cologne (1953)	Black rhinoceros	≥4	Male	Unknown	Died of TB	From wild	(4)
1961	Osaka  Japan	Captive (zoo)	... → Osaka (1955)	Black rhinoceros	≥6	Male	Unknown	Died of TB	From wild	(4)
1969	Prague, Czech Republic	Captive (zoo)	... → Imported by Behrend (dealer?) → Prague (1954)	Black rhinoceros	≥15	Male	Unknown	Died of TB	From wild	(4)
1970	Hluhluwe- iMfolozi, South Africa	Free- ranging	No record of any translocation	Black rhinoceros	Old; age not specified	Female	Unknown	Condition deteriorated up to death, general poor health. Acid fast <i>Mycobacteriu</i> <i>m</i> sp. isolated from lung granulomas at necropsy.	From wild (HiP)	(6)
1978	USA  Washington DC	Captive (zoo)	... → purchased from “Dealer A” Washington D.C. (1961)	Black rhinoceros	20	Female	<i>M. bovis</i>	Ante-mortem diagnosis- died of TB after 3 day- illness during a time period of extreme	From wild  East Africa	(4,7)

								heat & humidity.		
1979	USA Washington DC	Captive (zoo)	... → purchased from “Dealer A” → Washington D.C. (1960)	Black rhinoceros	Unknown	Male	<i>M. bovis</i>	Ante-mortem diagnosis – <i>M. bovis</i> isolated from lung biopsy. Euthanized.	From wild East Africa	(4,7)
1984	San Diego USA	Captive (zoo)	Hannover, Germany (1968) → Budapest (1969) → San Diego Wild Animal Park (1983)	Black rhinoceros	16	Female	<i>M. tuberculosis</i>	Died of TB	Captive born - Hannover, Germany	(4,9,10)
1990	Hluhluwe iMfolozi, South Africa	Free-ranging	-	Black rhinoceros	Unknown	Unknown	Unknown	Necropsy reveals lesions consistent with TB; no culture confirmation	From wild (HiP)	(11)
1990	USA	Captive (zoo)	-	Black rhinoceros	Unknown	Unknown	<i>M. tuberculosis</i>	-	-	(9)
1991	Audubon, New Orleans,	Captive (zoo)	Umfolozi, South Africa → NY Bronx (1962) → New Orleans (1974)	White rhinoceros	29	Male	<i>M. bovis</i>	Died of TB and pneumonia	From wild (HiP)	(4,12,13)

	USA									
1992	Mysore, India	Captive (zoo)	No translocation. Parents were purchased by the zoo from the same dealer, were captured as adults from wild.	Black rhinoceros	13	Female	<i>M. tuberculosis</i>	Died of TB	Captive born - Mysore, India	(4,14)
1993	Chicago, USA	Captive (zoo)		Black rhinoceros	31	Female	<i>M. tuberculosis</i>	Positive <i>M. tuberculosis</i> cultures from sputum and gastric lavage. Treated – RIF <sup>1</sup> , INH <sup>2</sup> , PZA <sup>3</sup> .  Died 1994: <i>M. tuberculosis</i> cultured from thoracic lymph node, tracheal	Origin unknown	(8,15)

---

<sup>1</sup> Rifampicin

<sup>2</sup> Isoniazid

<sup>3</sup> Pyrazinamide

								exudates, and gastric lavage.		
1994	Mysore, India	Captive (zoo)	No translocation. Born to same parents as the rhinoceros in which the previous reported TB case at this zoo (1992) occurred.	Black rhinoceros	22	Male	<i>M. tuberculosis</i>	Died of TB	Captive born Mysore, India	(4,14)
1998	Los Angeles, USA	Captive (zoo)	Housed in same facility as previous known TB cases	Black rhinoceros	24	Female	<i>M. tuberculosis</i>	Nasal wash in 1998 was positive for <i>M. tuberculosis</i> , treated with RIF <sup>4</sup> , INH <sup>5</sup> , PZA <sup>6</sup> . Observed weight loss and nasal discharge in 2000, no improvement so it was	Origin unknown	(15,16)

---

<sup>4</sup> Rifampicin

<sup>5</sup> Isoniazid

<sup>6</sup> Pyrazinamide

								euthanized in 2001.		
2007	Limpopo, South Africa	Captive (zoo)	Mkhuze (free-ranging) → HiP → Limpopo NZG's Mokopane Biodiversity Conservation Centre (displaced in Mkhuze by another bull) (2002)	Black rhinoceros	Old (Estimated 35-40)	Male	<i>M. bovis</i>	Animal euthanized due to poor condition, old age, dental attrition. Two lung granulomas culture positive for <i>M. bovis</i> .	From wild → Mkhuze	(17)
2013	Texas, USA	Captive (zoo)		Black rhinoceros	33	Male	<i>M. tuberculosis</i>	Died after non-specific illness. <i>M. tuberculosis</i> isolated from lungs at necropsy, spoligotype uncommon in animals but present in humans worldwide.		(4,18)
2014	Private Reserve,	Free-ranging	-	Black rhinoceros	Adult	Male	<i>M. bovis</i>	Dies of pneumonia	From wild-private	(19)

	South Africa							<i>M. bovis</i> culture positive.	reserve, South Africa	
2016	Kruger National Park, South Africa	Free-ranging	-	Black rhinoceros	Adult	Female	<i>M. bovis</i>	Animal euthanized due to poor prognosis. Lung tissue was culture- and PCR- positive/ confirmed <i>M. bovis</i> .		(19)
				White rhinoceros	Subadult	Male	<i>M. bovis</i>	Poor condition of animals attributed drought or poaching wounds – animals were euthanized.		(19)
					Adult	Female				
					Adult	Male				
					Subadult	Female				
2017	Kruger National Park, South Africa	Free-ranging	-	White rhinoceros	Subadult	Female		bTB was not considered a cause of poor condition, and no <u>generalized</u>		
					Adult	Male				

								disease or infection in these animals.  <i>M. bovis</i> culture positive from one or more of lymph nodes, and/or the lungs. Strain type: SB02121, the most common strain in the KNP.		
--	--	--	--	--	--	--	--	---	--	--

\*Where a rhinoceros originated “from wild” and no additional information is provided, the individual originated from an unrecorded location on the African continent.

This data was located in the Rhinoceros Resource Centre (RRC) literature database, or through extensive web searches with (9) as a guide