

Blais Y., Drouilly M., Ipavec A., Henschel P. & Durant S. M. 2023. Historical and current distributions of cheetah in Northwest Africa. *Cat News* 77, 28–33. Supporting Online Material

Table T1. List of museums contacted for the study and their location

Austria	Naturhistorisches museum Wien
Belgium	Institut royal des sciences naturelles de Belgique Musée Royal d’Afrique centrale
France	Museum National d’Histoire Naturelle de Paris Museum de Nantes Former Natural History Museum of Rennes Museum départemental du Var Natural History Museum of Toulouse Maison de la taxidermie
Germany	<u>Naturkundemuseum Stuttgart</u> Museum für Naturkunde Berlin
Ireland	National Museum of Ireland/ Natural History Museum, Dublin
Portugal	Museu de História Natural e da Ciência da Universidade do Porto Museu Nacional de História Natural e da Ciência. Museu da Universidade de Lisboa
Senegal	Collections de l’Institut Fondamental d’Afrique Noire, Université de Dakar
Singapore	Lee Kong Chian Natural History Museum
Spain	Museo nacional de ciencias naturales
Sweden	Naturhistoriska riksmuseet
United Kingdom	National Museums of Scotland Natural History Museum, London Natural History Museum, Tring
United States	American Museum of Natural History Natural History Museum of LA County The Harvard Museum of Natural History Cambridge

Table T2. Type 1 records (accurate identification and precise locality) with location, year of the sighting (when available), number of individuals observed (when available) and type of observation (“Material”, “Specimen” or “Picture”)

Location	Year	Nb individuals	Type of obs.	Comment	Ref.
ALGERIA					
Ahaggar National Park	1973	2	Specimen		1
	1973	1	Specimen		2
	1984	1	Specimen		3
	1995	1	Specimen		2
	1996	1	Specimen		4
	1997	1	Specimen		4
	1997	2	Material	Skins	2
	1997	1	Specimen		4
	1998	4	Specimen		4
	1998	1	Specimen		4
	1999	1	Material	Female	5
	2000	1	Material		5
	2000	1	Material	Female	5
	2008	4	Picture	3 males + 1 unidentified sex	6
2010	3	Picture	2 males + 1 subadult	6	
	1	Picture		7	
Idlès	2005	1	Picture		8
Tassili National Park	1998	1	Specimen		9
	1998	1	Material	Skull	10
BENIN					
Pendjari National Park	2017		Picture	1 male, 2 females, 1 unknown sex	11
Pendjari National Park Complex	2021		Picture		12
W National Park Complex	2021		Picture		12
MALI					
N Nioro	1930	1	Material	Skull, skeleton, female	13
Tombouctou	1938	1	Material	Mounted skin	14
MAURITANIA					
Banc d’Arguin	1931	1	Specimen		15
Cap Timiris	1972	1	Specimen		16
NIGER					
Termit & Tin	2010	1	Picture		17
Toumma National Nature and Cultural Reserve	2010	1	Picture		17
	2011	1	Picture		17

NIGERIA					
Yantumaki (Katsina Division)		1	Material	Skull, adult	18
Bauchi Plateau	1905	1	Specimen	Skull, Young	18
SENEGAL					
Kedougou	1986	1	Specimen		19

References cited in Table 2: 1 – Kowalski & Rzebik-Kowalska (1991), 2 – I.N.R.F cited in Hamdine et al. (2003), 3 – O.N.P.A cited in Hamdine et al. (2003), 4 – Hamdine et al. (2003), 5 – Ecomusée de l'O.P.N.A cited in Hamdine et al. (2003), 6 – Belbachir et al. (2015), 7 – Rabeil & Turmine (2016), 8 – iNaturalist (2022), 9 – O.P.N.T cited in Hamdine et al. (2003), 10 – Ecomusée de l'O.P.N.T cited in Hamdine et al. 2003, 11 – Ipavec et al (2018), 12 – Drouilly et al (2022), 13 – Naturhistorisches museum Wien, Austria, 14 – Muséum d'Histoire naturelle de Toulouse, France, 15 – Trotignon (1975) cited in Jebali (2017), 16 – Mahé (1985) cited in Jebali (2017), 17 – Sillero-Zubiri et al. (2015), 18 – Rosevear (1974), 19 – Jebali (2008) cited in Belbachir (2008).

Table T3. Type 2 records (accurate identification and precise locality) with location, year of the sighting (when available), number of individuals observed (when available) and type of observation (“Sighting” or “Spoor”).

Location	Year	Nb individuals	Type of obs.	Comment	Ref	
ALGERIA						
West part	1967		Sighting		1	
	1884		Sighting		1	
	1939		Sighting		1	
	1957		Sighting		1	
	1960		Sighting		1	
	South-western part (including the Ahaggar)	1960		Sighting		1
		1961		Sighting		1
		1965		Sighting		1
		1966		Sighting		1
		1966		Sighting		1
		1981		Sighting		1
		1981		Spoor		2
		1993	1	Sighting		3
		1997	4	Sighting		4
1997			Spoor		4	
Ahaggar National Park	1999	1	Sighting		4	
	1999	2	Sighting		4	
	1999	2	Sighting		4	
	2000	8	Sighting		4	
	2005	8	Spoor		5	
	2011		Sighting	Male and female with offspring (east of Idlès)	6	
	2011		Sighting	Male and female with offspring	6	
	2012		Sighting	Male and female with offspring (east of Idlès)	6	
	2012		Sighting	Male and female with offspring	6	
	2012	3	Sighting	Males	6	
	2012	2	Sighting	Females	6	
	2012	4	Sighting	Young	6	
	Tassili National Park	1981	1	Sighting		7
		1981		Spoor		4
2009		1	Sighting	Female	6	
2010		4	Sighting		6	
2011		5	Sighting		6	
2012		5	Sighting		6	
BENIN						
W National Park (Benin)/ W Benin-complex	1968	3	Sighting		8	
	2000-2006	22	Sighting		9	

W National Park (Karimama)	2008	1	Sighting		10
	2004	4	Sighting	2 couples	11
W National Park, (Sapingou)	2005	1	Sighting		11
	2009	4-5	Sighting		11
	2009	1	Sighting		11
	1974- 1979		Sighting		12
	2000- 2006		Sighting	84 observations of cheetah	9
Pendjari Biosphere Reserve/ Pendjari National Park	2001- 2002		Sighting	40 observations of cheetah	13
	2003- 2004	5	Sighting		14
	2006- 2007	2	Sighting		15
	2007- 2008	13	Sighting		15
	2008	1	Sighting		9
Bembéréké	1974- 1979		Sighting		12
BURKINA FASO					
	1901	2	Sighting		16
	1973	11	Sighting		17
	1974	5	Sighting		17
	1974	1	Sighting		18
	1976	3	Sighting		17
	1976	1	Sighting		17
	1977	4	Sighting		18
Arly National Park	1977	5	Sighting		17
	1979	6	Sighting		17
	2005	1	Sighting		11
	2006	1	Sighting		11
	2009		Spoor		11
	2012		Spoor		19
	2012		Spoor		19
	2014		Spoor		20
Forage Christine, Sahel voltaïque	1980		Sighting		17
Kondio/ Kourtiagou hunting reserve	2003- 2004	1	Sighting		21
	2009		Spoor		11
	2006	1	Sighting		11
Singou total reserve	2008	2	Sighting	1 pair	11
	2008	1	Sighting		11
	2008	1	Sighting		11
W National Park, Kabougou, Mekrou river	2006	2	Sighting		11
Pama Centre Sud (WAP)	2013		Spoor		22
MALI					

Ilebdjan valley, massif of Adrar des Iforas	1997	1	Sighting		23
MAURITANIA					
Agneïter region	1950	1	Sighting		24
NIGER					
Niger River, Karey Kopto, W National Park	1993	1	Sighting	Same female	25
	1994	1	Sighting		25
Niger River (Embarcadere) in W National Park	1994	3	Sighting	1 female and 2 cubs	25
	1994	4	Sighting	1 female, 2 cubs and 1 unidentified	25
Niamey road, close to Tapoa, W National Park	1993	5	Sighting	2 adults and 3 sub-adults	25
Niamey road, laterite road leading out of the W National Park	1995	5	Sighting		25
		5	Spoor		25
Nyafarou (center of W National Park)		1	Sighting		25
Moussiemou (near the center of W National Park)		1	Spoor		25
Fofo, Mekrou River (W National Park)		1	Spoor		25
Baniguitti (W National Park)			Sighting		25
Bata region (W National Park)	1969-1972	1	Sighting		26
	2007	1	Sighting		27
Termit & Tin Toumma National Nature and Cultural Reserve	2009	1	Sighting		27
	2010	1	Sighting		27
			Spoor		27
		1	Spoor		27
NIGERIA					
Near Katagum	1963	1	Sighting		28

References cited in Table 3: 1 – Kowalski & Rzebik-Kowalska (1991), 2 – De Smet (1989) cited in Hamdine et al. (2003), 3 – I.N.R.F cited in Hamdine et al. (2003), 4 – Hamdine et al. (2003), 5 – Busby (2006), 6 – DGF-ALGERIE (2015), 7 – O.P.N.T cited in Hamdine et al (2003), 8 – Dupuy (1969b), 9 – Berzins et al. (2007), 10 – Kiki & Ganglo (2017), 11 – Médard et al. (2010), 12 – Sayer & Green (1984), 13 – Di Silvestre & Bauer (2013), 14 – Di Silvestre (2004), 15 – Di Silvestre (2008), 16 – Bousquet (1981) cited in Bousquet et al. (1982), 17 – Bousquet et al. (1982), 18 – Green (1979) cited in Bousquet et al. (1982), 19 – Henschel et al. (2012), 20 – UEMOA & PNUD (2014), 21 – Di Silvestre (2004b) cited in Di Silvestre (2004), 22 – Mathieu (2013), 23 – Drieux-Dumont (2002), 24 – Campredon (2000) cited in Jebali (2017), 25 – Van Syckle (1995), 26 – Poche (1973), 27 – Sillero-Zubiri et al. (2015), 28 – Sikes (1964).

Table T4. Type 3 records (accurate identification and imprecise locality) with location, year of the sighting (when available), number of individuals observed (when available) and type of observation (“Material”, “Specimen”, “Sighting” or “Spoor”).

Location	Year	Nb individuals	Type of obs.	Comment	ref
ALGERIA					
Ahaggar National Park	Since 1999	1	Specimen	Skins	1
	2005		Spoor		1
Ahaggar National Park, Tefedest area	2004	1	Specimen	Captured	1
	2005		Spoor		1
desert 'piste' between Agadès and Tamanrasset, in the Hoggar mountains			Sighting		2
eastwards on the way from the Hoggar to Djanet and Libya			Sighting		2
BURKINA FASO					
	End of 90'	1	Sighting		3
NIGER					
	1986	1	Material		4
	2002	2	Sighting	1 adult and 1 young	5
	2002	3	Sighting	1 female and a group of 2 cheetahs	5
Termit region	2002		Spoor		5
	2002		Spoor		6
	2002		Spoor		6
	2002	2	Sighting		6
	2002	1	Sighting		6
	2004	23	Sighting		7
	2004	20	Spoor		7
	1980	2	Sighting		8
	1982	1	Specimen		8
	1982	3	Sighting	1 female and 2 young	8
Ténéré	1982	5	Sighting		8
	1983	1	Sighting		8
	1983	6	Sighting		8
	1983	2	Sighting	1 female and 1 young	8
	1983	1	Sighting	-	8

	1990	3	Specimen	1 female and 2 young	8
	1990	4	Sighting	1 female and 3 young	8
	1990	3	Sighting	3 young	8
		4	Specimen	2 bodies and 2 skins	8
South of Ténéré	1982	3 minimum	Sighting		8
Air massif, Azaouak (Azawagh), Ténéré			Spoor		8
W National Park Niger and Tamou total reserve of fauna	From 1972 to 2003	79	Sighting		9
W National Park	1969-1972	1	Sighting		10
	1970	4	Sighting		10
NIGERIA					
		3	Sighting		11
North of Nigeria		1	Material	Male, Young	12
SENEGAL					
	1835	1	Material	Female, Skull	13
	1862	1	Material	Young Skull + shoulder blade	14
		1	Material	Skeleton	15
TOGO					
		1	Material	Part of skeleton	16

References cited in Table 4 : 1 – Wachter et al. (2005), 2 – Myers (1975), 3 – P. Chardonnet (21/06/2022, pers. comm.), 4 – Leibniz Institute for the Analysis of Biodiversity Change (LIB), 5 – Claro & Sissler (2002), 6 – Claro & Sissler (2003), 7 – Claro (2003), 8 – Dragesco-Joffé (1993), 9 – Claro et al. (2006), 10 – Poche (1973), 11 – Rosevear (1974), 12 – Natural History Museum (2022), 13 – Mammal collection of Muséum National d’Histoire Naturelle, Paris, France, MNHN-ZM-AC-1863-24, 14 – Mammal collection of Muséum National d’Histoire Naturelle, Paris, France, MNHN-ZM-AC-A1821, 15 – Muséum de Nantes, France, 16 – Slieker et al (2022).

Table T5. Type 4 records (questionable identification and precise locality) with location, year of the sighting (when available), number of individuals observed (when available) and the type of observation (“Specimen”, “Sighting” or “Spoor”).

Location	Year	Nb individuals	Type of obs.	Comment	ref
BURKINA FASO					
Diapaga	1935	1	Specimen		1
MALI					
Kidal, Adrar des Iforas (Ifoghas)	1973		Sighting		2
West of Kidal, Adrar des Iforas (Ifoghas)	1999	1	Sighting		3
NIGER					
W transboundary Park, Karey Kopto (village)			Spoor		4
SENEGAL					
Yaré-Lao	1981	1	Sighting		5
Dar Salam	1990	1	Sighting		6

References cited in Table 5: 1 – Bigourdan & Prunier (1937), 2 – Anadu (1987), 3 – Drieux-Dumont (2002), 4 – Dupuy (1971), 5 – Dupuy (1984), 6 – Jebali (2008) cited in Belbachir (2008).

Table T6. Type 5 records (questionable identification and imprecise locality) with location, year of the sighting (when available), number of individuals observed (when available) and type of observation (“Specimen”, “Sighting” or “Spoor”).

Location	Year	Nb individuals	Type of obs.	Comment	Ref
ALGERIA					
Ahaggar National Park, Tefedest area	2005		Spoor		1
BENIN					
Atacora region	1935	1	Specimen		2
BURKINA FASO					
	1992 (?)	1	Specimen	Skin	3
IVORY COAST					
Comoé National Park	Before 1970	1	Sighting		4
MALI					
Northern third of Mali extending far across the Sahara			Sighting		5
Skins found in Bamako and Mopti		2	Specimen	Skins	5
NIGER					
Air and Ténéré National Nature Reserve	2011	3	Sighting		6
Skins found in Niamey		8	Specimen	Skins	5
BENIN, BURKINA FASO, NIGER					
W-Arly-Pendjari-Oti-Mandori-Keran Ecosystem (WAPOK)	2003	1	Sighting		8

References cited in Table 6 : 1 – Wachter et al (2005), 2 – Bigourdan & Prunier (1937), 3 – Van Syckle (1995), 4 – Fischer et al (2002), 5 – Myers (1975), 6 – MESU/DD – DFC/AP (2012), 7 – Hamissou et al (2013) cited in MESU/DD – DFC/AP (2012), 8 – Bouché et al (2004).

References

- Anadu P. A. 1987. Progress in the conservation of Nigeria's wildlife. *Biological Conservation* 41, 237–251.
- Belbachir F. 2008. *Acinonyx jubatus ssp. hecki*. The IUCN Red List of Threatened Species 2008: e.T221A13035738.
- Belbachir F., Pettorelli N., Wacher T., Belbachir-Bazi A. & Durant S. M. 2015. Monitoring Rarity: The Critically Endangered Saharan Cheetah as a Flagship Species for a Threatened Ecosystem. *PLoS ONE* 10(1): e0115136.
- Berzins R., Claro F, Akpona A. H. & Alfa Gambari Imorou S. 2007. Conservation du guépard et développement durable dans les aires protégées du nord Bénin. Mission d'enquête auprès des villageois et des agents d'aires protégées (16/12/2005-26/02/2006). Société Zoologique de Paris, Paris. 57 pp.
- Bigourdan J. & Prunier R. 1937. Les mammifères sauvages de l'Ouest Africain et leur milieu. *Encyclopédie biologique*, Paris, pp. 110–111.
- Bouché P., Lungren C. G., Hien B. & Omondi P. 2004. Aerial Total Count of the “W”-Arli-Pendjari-Oti-Mandouri-Keran (WAPOK) Ecosystem in West Africa. April-May 2003. 108 pp.
- Bousquet B., Charest A., Gansaore G. & Ouedrago L. 1982. Inventaire des ressources en faune sauvage et étude économique sur son utilisation en zone rurale. Résultats des inventaires aériens de la faune dans les parcs nationaux. FAO FO : DP/UPV/78/008 ; Document de terrain N°5. Rome, pp. 15–19, 343.
- Busby G. 2006. The cheetah (*Acinonyx jubatus*) in Northern Africa a non-invasive genetic study of carnivores from the Ahaggar Mountains, Southern Algeria. 47 pp.
- Claro F. & Sissler C. 2002. Rapport de mission scientifique au Niger dans la région du Termit. IRD/MNHN/SZP. 30 pp.
- Claro F. 2003. Survey of Fauna in Niger. 6 pp.
- Claro F. & Sissler C. 2003. Saharan Cheetahs in the Termit Region of Niger. *Cat News* 38, 23–24.
- Claro F., Leriche H., Van Syckle S., Rabeil T., Hergueta S. & Fournier A. 2006. Survey of the Cheetah in W National Park and Tamou Fauna Reserve, Niger. *Cat News* 45, 4–7.
- Leibniz Institute for the Analysis of Biodiversity Change (LIB). ZFMK Mammalia collection. Occurrence dataset <https://doi.org/10.15468/gwqwux> accessed via GBIF.org on 2022-06-03.

Di Silvestre I. & Bauer H. 2013. Population status of carnivores in Pendjari Biosphere Reserve, Benin, in 2001-2002. *Cat News* 58, 16–19.

Di Silvestre I. 2004. Suivi des populations des grands carnivores dans la Réserve de Biosphère de la Pendjari. Octobre 2004. Rapport final. 22 pp.

Di Silvestre I. 2008. Coordination des activités de suivi et dénombrement des grands carnivores du complexe WAP (W-Arly-Pendjari). Rapport final, juin 2008. 27 pp.

DGF-ALGERIE. 2015. Plan d'action national pour la conservation du guépard et du lycaon en Algérie – Parc national de Tlemcen 12 – 13 Octobre 2015. Direction Générale des Forêts. 63 pp.

Dragesco-Joffé A. 1993. *La Vie Sauvage au Sahara*. Delachaux et Niestlé, Lausanne, pp. 119–126.

Drieux-Dumont A. M. 2002. Etude préliminaire du statut du guépard du Sahara (*Acinonyx jubatus*), Adrar des Iforas, Mali. *In* L'étude de la conservation des carnivores. Chapron, G & Moutou, F. (Eds). SFEPM, pp. 139.

Drouilly M., Ipavec A., Horion R., Henschel P. & Durant S. 2022. Suivis écologiques du léopard et du guépard dans les Complexes de la Pendjari et du W au Bénin – Sessions de piégeage photographique janvier-juillet 2021. ZSL-CCI/Panthera en collaboration avec AP/CPNP et AP/CPNWB. 35 pp. + Appendices.

Dupuy A. R. 1969b. Coup d'œil comparatif entre le Niokolo-Koba et quelques autres parcs nationaux de l'ouest africain. *In* Bulletin de l'Institut Fondamental d'Afrique Noire. Tome XXXI, A. Dakar, IFAN, pp. 1059–1064.

Dupuy A. R. 1971. Le parc national du Niokolo Koba Sénégal. *Biological Conservation* 3, 308–310.

Dupuy A. R. 1984. Note sur le statut actuel de quelques mammifères sauvages du Sahel nord-Sénégalais. *Mammalia* 48, 599–603.

Fischer, F., M. Gross, & K. E. Linsenmair. 2002. Updated list of the large mammals of the Comoé National Park, Ivory Coast. *Mammalia* 66, 83–92.

Hamdine W., Meftah T. & Sehki A. 2003. Distribution and status of the cheetah (*Acinonyx jubatus* -Schrebert, 1776) in the central Algerian Sahara (Ahaggar and Tassili). *Mammalia* 67, 439–443.

Henschel P., Kiki M., Sewade, C. & Tehou A. 2012. Improving the status of lions and cheetahs in their last stronghold in West Africa: the W-Arly-Pendjari Complex. New York, Panthera. 31 pp.

iNaturalist contributors, iNaturalist. 2022. iNaturalist Research-grade Observations. iNaturalist.org. Occurrence dataset <https://doi.org/10.15468/ab3s5x> accessed via GBIF.org on 2022-06-03.

Ipavec A., Durant S., Henschel P., Lapeyre V., Ouindeyama A. 2018 Cheetah and leopard population assessment in Pendjari National Park, Benin. ZSL-RWCP/Panthera/IUCN Cat SG/CENAGREF. 21 pp.

Jebali A. 2017. Déclin de la grande faune Sahélo-Saharaienne et tentatives de réintroduction. Editions universitaires européennes, pp. 126–135.

Kiki P. & Ganglo J. 2017. Census of the threatened species of Benin. Version 1.5. GBIF Benin. Occurrence dataset <https://doi.org/10.15468/fbbbfl> accessed via GBIF.org on 2022-06-03.

Kowalski K. & Rzebik-Kowalska B. 1991. Mammals of Algeria. Wroclaw: Polish Academy of Science, pp. 150–152.

Mathieu Y. 2013. Suivi écologique de la grande faune mammalienne dans trois zones de chasse de l'est de Burkina Faso. Travail de fin d'études présenté en vue de l'obtention du diplôme de Master Bioingénieur en gestion des forêts et des espaces naturels. Gembloux agro bio tech, Université de Liège. 95 pp.

Médard, P., Vié Traoré, M. & Berzins, R. 2010. Rapport d'enquête. Recensement des observations de guépards et autres carnivores dans les aires protégées de l'ouest du Burkina Faso. Mission d'enquête auprès des gardes faunes et pisteurs (16 février au 16 mars 2009). 52 pp.

MESU/DD-DFC/AP 2012 Plan d'Action National pour la Conservation du Guépard et du Lycaon en République du Niger. 56 pp.

Myers N. 1975. The Cheetah *Acinonyx jubatus* in Africa. IUCN Monograph n°4. IUCN, Morges, Switzerland, 91 pp.

Natural History Museum. 2022. Natural History Museum (London) Collection Specimens. Occurrence dataset <https://doi.org/10.5519/0002965> accessed via GBIF.org on 2022-06-03.

Poche R. 1973. Niger's Threatened Park W. Oryx 12, 216–222.

Rabeil T. & Turmine V. 2016. Atlas de la Réserve Naturelle Nationale de Termit et Tin-Toumma ; Projet Antilopes Sahélo-Sahariennes Niger, Sahara Conservation Fund, Niamey, Niger, pp. 30–31.

Rosevear D. R. 1974. The carnivores of West Africa. London: British Museum (Natural History), pp. 492–512.

Sayer J. A. & Green A. A. 1984. The distribution and status of large mammals in Benin. *Mammal Review* 14(1), 37–50.

Sikes S. K. 1964. A game survey of the Yankari Reserve of northern Nigeria. Part 1. *Nigerian Field* 29, 54–71.

Sillero-Zubiri C., Rostro-García S., Burruss D., Matchano A., Harouna A. & Rabeil T. 2015. Saharan cheetah *Acinonyx jubatus hecki*, a ghostly dweller on Niger's Termit massif. *Oryx* 49, 591–594.

Slieker F. J. A., van der Es H., Andeweg R. & Langeveld B. W. 2022. Natural History Museum Rotterdam - Specimens. Version 1.37. Natural History Museum Rotterdam. Occurrence dataset <https://doi.org/10.15468/kwqaay> accessed via GBIF.org on 2022-03-28.

UEMOA & PNUD. 2014. Large carnivore survey in the W-Arly-Pendjari complex 2014 (Inventaire des grands carnivores de l'écosystème W-Arly-Pendjari 2014). 37 pp.

Van Syckle S. J. 1995. The cheetah in W National Park, Niger, West Africa PCV - Tapoa, Park W Niger. 15 pp.

Wacher T., De Smet K., Belbachir F., Belbachir-Bazi A., Fellous A., Belghoul M. & Marker L. 2005. Sahelo-Saharan Interest Group Wildlife Surveys. Central Ahaggar Mountains (March 2005). iv + 34 pp.