Marker, L. (2005). Overview of the global wild cheetah population. Animal Keeper's Forum 7/8: 284-288.

Keywords: 1Afr/Acinonyx jubatus/cheetah/distribution/status

Abstract: The status of the cheetah (*Acinonyx jubatus*), varies widely throughout its range with perhaps 32 countries where cheetahs are still found. All populations are classified as vulnerable or endangered by the World Conservation Union's (IUCN) Red Data Book and are regulated by the Convention for International Trade in Endangered Species of Wild Fauna and Flora (CITES) as Appendix I. Although there has not been a comprehensive survey of African cheetahs since 1975, there is a consensus that the cheetah population is declining throughout Africa. Total number of cheetahs estimated at less than 15,000 is based on a literature review and mail questionnaire surveys and have been used as the source for data that is also published in the IUCN Cat Specialist group Wild Cats.

### **Overview of the Global Wild Cheetah Population**

Bv

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The status of the cheetah (*Acinonyx jubatus*), varies widely throughout its range with perhaps 32 countries where cheetahs are still found (Marker, 1998). All populations are classified as vulnerable or endangered by the World Conservation Union's (IUCN) Red Data Book and are regulated by the Convention for International Trade in Endangered Species of Wild Fauna and Flora (CITES) as Appendix I (CITES 1992). Although there has not been a comprehensive survey of African cheetahs since 1975, there is a consensus that the cheetah population is declining throughout Africa (Nowell & Jackson, 1996; Breitenmoser & Breitenmoser-Würsten, 2001). Total number of cheetahs estimated at less than 15,000 is based on a literature review and mail questionnaire surveys (Kraus & Marker-Kraus, 1991; Marker-Kraus and Kraus, 1996; Marker, 1998) and have been used as the source for data that is also published in the IUCN Cat Specialist group *Wild Cats* (Nowell & Jackson, 1996).

The wild cheetah is nearly extinct in Asia, with approximately 100 surviving in small-pocketed areas through Iran (Nowell & Jackson, 1996; Marker, 1998; UNDP, 2001). Free-ranging cheetahs inhabit a broad section of Africa including areas of North Africa, Sahel, eastern, and southern Africa (Kraus & Marker-Kraus; 1991, Nowell & Jackson 1996; Marker, 1998). Two strongholds remain for the cheetah, Kenya and Tanzania in East Africa and Namibia and Botswana in southern Africa (Kraus & Marker-Kraus, 1991; Nowell & Jackson, 1996; Marker, 1998). In East Africa, the cheetah has been found in the agriculture land in the Masai Mara region outside the national parks and were co-existing with the Narok Masai, whose stock they left alone (Burney, 1980; Hamilton, 1986). Recent surveys being conducted by Mary Wykstra and Sarah Durrant in both Kenya and Tanzania have indicated different challenges confronting cheetahs from these communities as a result of livestock predation by cheetahs. In southern Africa, cheetahs are killed regularly in farming areas due to livestock predation and the attitudes of the farmers (Morsbach, 1987; Wilson, 1987; Stuart & Wilson, 1988; Lawson, 1991; Marker-Kraus et al., 1993; Marker-Kraus et al., 1996; Marker & Schumann, 1998, Marker et al. 2003). Much of the conflict found in southern Africa is as a result of the increase of fenced game farms and cheetahs catching wild game that has value (Marker 2003, Marker et al 2003). Over the past few years there is an indication that cheetah populations have increased in Zimbabwe and South Africa as well as conflict with livestock and game farmers (A, Van Dyke, 1999; pers comm, N. Purchase, 2000 pers. comm.). Several programs are now working actively towards censusing cheetah populations in southern Africa, Kenya and Tanzania (Bashir et al. 2004). Conservation and education programs are also being actively conducted in many of these countries as well (Bartels et al. 2002).

There has been limited information from North or West Africa and the cheetah's future in these areas is questionable (Marker, 1998; Breitenmoser & Breitenmoser-Würsten, 2001). As part of an IUCN Biodiversity Project, status surveys have been carried out in Algeria, Egypt, Libya, Morocco and Tunisia (Jackson, 2001). Cheetah populations were reported to be in southern Algeria (O'Mopsan, 1998; Jackson, 2001); and in Egypt, cheetahs were reported near the Libyan border, but surveys found no evidence in other parts of former range (Saleh, 1997; Jackson, 2001). Cheetahs have been reported in the tri-country W park in Niger, Burkino Faso, and Benin (Van Syckle, 1996).

In February 2005, a reconnaissance trip into the D'Hoggars National Park in Algeria was undertaken along with members of the Sahelo-Saharan Interest Group to identify the presence of cheetahs in the area and to identify their survival risks (pers com). Park officials showed recent photos of cheetah. Photos were also presented by a tour operator of a dead cheetah that had killed livestock. During the reconnaissance trip, cheetah scat and cheetah marking trees were found and recorded (pers com).

Cheetahs continue to survive in small, pocketed groups in isolated areas throughout the Sahel, with

a low estimate of 9,000 animals and an optimistic estimate of 12,000 animals (Marker-Kraus et al. 1996; Nowell & Jackson, 1996; Marker, 1998). Perhaps for the cheetah though, individual numbers of animals may not be the important point, but the numbers of viable populations still existing. Viable populations may be found in only half or less of the countries where cheetahs still exist (Marker, 1998).

Over the past 30 years, the cheetah has suffered a devastating decline of available habitat and prey throughout its range, both of which are necessary for its survival. As reported throughout Africa, cheetahs are not doing well in protected wildlife reserves due to increased competition from other, larger predators such as lion and hyenas (Laurenson, 1991; Morsbach, 1987; Mills pers comm. 1991, 2001; Caro, 1994; Marker-Kraus et al., 1996; Nowell & Jackson, 1996). Therefore, a large percentage of the remaining, free-ranging cheetah populations are outside of protected reserves or conservation areas (Marker, 1998). The cheetah generally has been considered to inhabit open country and grasslands. More recently, cheetahs have been reported to use a wide variety of habitats and are often reported in dense vegetation eg. Kora Reserve in Kenya, Botswana's Okavango Delta, Serengeti woodlands, and Namibian farmlands (Caro, 1994; Marker-Kraus et al., 1996, Marker 2003).

The ability of the cheetah to adapt to a changing ecological system has been brought about primarily by conversion of its preferred habitat to farmland and is perhaps the critical question in estimating the population's survivability in Africa (Myers, 1975). In several studies during the past 25 years, the cheetah was reported to suffer a decrease in numbers as land was developed and suitable habitat converted to agriculture (Wrogemann, 1975; Hamilton, 1986; Myers, 1975; Cambell & Borner, 1988; Wilson, 1988; Morsbach, 1987; Marker-Kraus & Kraus, 1990; Marker-Kraus et al., 1996; Nowell & Jackson, 1996).

Controlling factors determining cheetah survival include small populations, restricted habitats with a limited prey base, conflict with nomadic herders, and wars that have supplied guns and ammunition to the populace, who may then poach all forms of wildlife for food and profit; poaching for pelts, and conflict with commercial livestock farmers and game farmers (Marker, 1998; Jackson, 2001).

Priorities from the Cat Specialist Group meeting in August 2001 (Breitenmoser & Breitenmoser-Würsten, 2001) include encouraging support for:

- a survey in North Africa, populations critically endangered due to fragmented populations
- a survey in Iran and the development of a conservation action plan
- the development of regional programs (S Africa, C Africa, N Africa)
- a pan-African survey to refine population estimates and threats
- conservation outside protected areas
- conservation efforts to reduce livestock conflict
- a census program in countries where cheetah trophy hunting is conducted
- an increased need to develop prey base management throughout the cheetahs range
- a tourism education program in parks to reduce stress (e.g. Kenya)
- the increased cooperation between international captive population management
- a global master plan

Distribution: Algeria; Angola; Benin; Botswana; Burkina Faso; Cameroon (ex?); Central African Republic; Chad; Democratic Republic of Congo, Egypt (ex?); Ethiopia; Gambia (ex?); Iran; Kenya; Libya (ex?); Malawi; Mali; Mauritania; Morocco (ex?); Mozambique; Namibia; Niger; Nigeria (?); Pakistan (ex?); Senegal (ex?); Somalia; South Africa; Sudan; Swaziland; Tanzania; Togo; Uganda; Western Sahara (ex?); Zaire (ex?); Zambia; Zimbabwe (Nowell & Jackson, 1996; Marker, 1998; Breitenmoser & Breitenmoser-Würsten) (ex? = possibly extinct).

## East Africa A. j. raineyii



- Kenya (~1000)
- Tanzania (~1000)
- Uganda (<50?)</li>
- Somallia (<300?)</li>

## Southern Africa A. j. jubatus



- Namibia (~3000)
- Botswana (~1500)
- South Africa (~1000)
- Zimbabwe (~1000)
- Zambia (~50)
- Mozambique (?)
- Malawi (?)
- Angola (?)

(Editor's Note: View and download the 2001 Global Cheetah Action Plan at: www.cbsg.org/reports/reports/ exec\_sum/GlobalCheetah\_LowRes.pdf)

# Cheetah populations that are critically endangered



- North Africa and Asia: A. j. venaticus (<500)
- West Africa: A. j. hecki (~500)
- Central Africa: A. j. soemmeringii (500-1000)



#### African Continent Cheetah Distribution Map

#### **References Cited:**

- Bartels, P., H. Berry, D. Cilliers, A. Dickman, S. Durant, J. Grisham, L. Marker, M. Mulama, B. Schumann, U. Tubbesing, L. Venter, D. Wildt, S. Ellis, and Y. Friedmann. 2002. Global cheetah conservation action plan: 2002. Final report. IUCN/SSC Conservation Breeding Specialist Group, Apple Valley, MN.
- Bashir, S., Daly, B, Durant, S.H., Forster, H., Grisham, J., Marker, L., Wilson, K., Friedman, Y. 2004. Global Cheetah (*Acinonyx jubatus*) Monitoring Workshop. Final Workshop Report Conservation Breeding Specialist Group (SSC/IUCN) Endangered Wildlife Trust.
- Breitenmoser, U. & Breitenmoser, Würsten, C. 2001. Cat Specialist Core Group Report. Sparenmoos, Switzerland.
- Burney, D.A. 1980. The effects of human activities on cheetah (*Acinonyx jubatus*, Schreber) in the Mara region of Kenya. Msc. Thesis, Univ of Nairobi, Nairobi, pp.219.
- Campbell, K. & Borner, M. Cited in Cat News . P. Jackson, (Ed.) IUCN Publ, Gland, Switzerland. Vol.8, 1988, pp.9
- Caro, T. 1994. Cheetahs of the Serengeti Plains, Group Living of an Asocial Species. Univ. of Chicago Press, Chicago, IL.
- CITES, 1992. Quotas for trade in specimens of cheetah. Eighth meeting of the convention of International Trade in Endangered Species of Wild Fauna and Flora. DOCUMENT 8.22 (rev.):1-5.
- Frame, G.W. 1992. (pers comm.) C/O African Wildlife Husbandry Development Association, 01 B.P.5570, Ouagadougou 01, Burkina Faso.
- Gros, Paula, 1989, 1990, 1991. (pers comm.). Wildlife and Fisheries Department, University of California at Davis, Davis, California 95616, USA.
- Hamilton, P.H. 1986. Status of the cheetah in Kenya, with reference to sub-Saharan Africa. In: Cats of the World: Biology, Conservation, and Management. S.D. Miller; D.D. Everett, (Eds.) Washington, DC, National Wildlife Federation.
- Jackson, P. 2001. Report to the Cat Specialist Core Group, Sparenmoos, Switzerland.
- Kraus, D. & Marker-Kraus, L. 1991. Status of cheetah. Report to the IUCN Cat Specialist Group, Gland, Switzerland.
- Lawson, Dave. 1991. (pers comm.). Department of Wildlife and National Parks, Gaboronne, Botswana.
- Laurenson, K. 1991. Cheetahs never win. BBC Wildlife Magazine, Feb. pp 99-105.
- Marker, L. 1998. Current Status of the Cheetah (Acinonyx jubatus). In: Proceedings of a Symposium on Cheetahs Game Ranch Animals. (Ed) B.L. Penzhorn, Onderstepoort, South Africa. pp.1-17.
- Marker, L. (2003) Aspects of cheetah (*Acinonyx jubatus*) biology, ecology and conservation strategies on Namibian farmlands, pp. 476 *Department of Zoology*, University of Oxford, Oxford, U.K.
- Marker, L.L., Dickman, A.J., Mills, M.G.L. & Macdonald, D.W. (2003) Aspects of the management of cheetahs, *Acinonyx jubatus jubatus*, trapped on Namibian farmlands. *Biological Conservation*, 114, 401-412.
- Marker, L., & Schumann, B.D. 1998. Cheetahs as problem animals: management of cheetahs on private land in Namibia. In: Proceedings of a Symposium on Cheetahs as Game Ranch Animals. (Ed) B.L. Penzhorn, Onderstepoort, South Africa. pp.90-99.
- Marker-Kraus, L. & Kraus, D. 1990. Investigative trip to Zimbabwe and Namibia. Cat News. P.Jackson, (Ed.) IUCN Publ, Gland, Switzerland. Vol.12, (1) pp 16-17.
- Marker-Kraus, L., Kraus, D., Carpenter, M. 1993. The cheetah in Botswana: An overview. In: 1992International Cheetah Studbook, L.Marker-Kraus, (Ed). NOAHS Center, National Zoo, Washington, D.C.
- Marker-Kraus, L., Kraus, D., Barnett, D., Hurlbut, S. 1996. *Survival of cheetah on Namibian Farmlands,* Cheetah Conservation Fund Publication, Windhoek.
- Marker-Kraus, L. & Kraus, D. 1996. Update report on the status of cheetah prepared for the Cheetah and Lion PHVA briefing book. 1996 International Cheetah Studbook, NOAHSCenter, Smithsonian.
- Mills, Gus. 1991, 2001. (pers comm.). Kruger National Park, P.O. Box 125, Skukuza 1350, South Africa.
- Morsbach, D. 1987. Cat News. P. Jackson, (Ed.) IUCN Publ, Gland, Switzerland. Vol.6, 1987, pp. 25-26
- Myers, N. 1975. The cheetah, *Acinonyx jubatus*, in Africa. *IUCN Monograph 4*. Morges, Switzerland, International Union for Nature and Natural Resources.
- Nowell, K. & Jackson, P. 1996. Wild Cats, Burlington Press, Cambridge.
- O'Mopsan, L.K. 1998. The Cheetah in Algeria. In: *1996 International Studbook*, L. Marker, (Ed.), NOAHS Center, National Zoo. Washington DC.
- Purchase, N. 2000. Pers comm...Aberdeene University., dnp@icon.co.zw
- Saleh, M.1997. Conservation of the Cheetah. *Egypt's Naitonal Report*, an IUCN Report. Egyptian IUCN National Commission, Project No. 7519E/DDA/ASR/Africa Program.
- Stuart, C. & Wilson, V., 1988. *The Cats of Southern Africa*, IUCN Cat Specialist Group, African Carnivore Survey, Chipangali Wildlife Trust, Bulawayo.
- UNDP. 2001. GEF Grant, Project no. IRA/00/G35, entitled: Conservation of the Asiatic Cheetah,
  - Its Natural Habitat and Associated Biota in the I.R. of Iran.
- Van Dyke, A, 1999. Pers. Comm. DeWildt Cheetah Breeding Centre, South Africa. Cheetah@DeWildt.org.za Van Syckle, S. 1996. The cheetah in W National Park, Niger, West Africa. In:

1994/1995 International Cheetah Studbook, L. Marker-Kraus (Ed). NOAHS Center, National Zoo, Washington, DC.

- Wilson, V.J. Cat News . P. Jackson, (Ed.) IUCN Publ, Gland, Switzerland. Vol.8, 1988, pp. 9.
- Wrogemann, N. 1975. Cheetah Under the Sun. McGraw & Hill, Johannsburg.