

U.S. Fish and Wildlife Service
Division of Scientific Authority
Convention on International Trade in Endangered Species of Wild Fauna and Flora
(CITES)
Record of Advice on Import Permit Application

Application Number: 70837D

Date Received by DSA: March 6, 2020

DMA Contact: Rogelio Hubbard

Applicant: Todd (b) (6) Bockwoldt
Chesapeake, Virginia

Specimens and Species: Leopard (*Panthera pardus*)

Wild (Namibia)

One (1) personal sport-hunted trophy
(life-sized mount; skin, skull, and claws)

Recipient: Self

Type of Permit: Appendix I Import (CITES)

ADVICE

After reviewing the above permit application, we find that the proposed import is likely to be for purposes that are not detrimental to the survival of the species.

Species Background:

The leopard (*Panthera pardus*) has one of the largest geographic ranges of any terrestrial mammal in the world and ranges from southern Africa, through the Middle East, to eastern Asia from South Africa to eastern China and Russian Federation (Stein *et al.* 2016). The African leopard (*P. p. pardus*) is one of about nine leopard subspecies and occurs primarily in sub-Saharan regions (Jacobson *et al.* 2016). A habitat generalist, the leopard – all subspecies considered – occupies mesic woodlands, grassland savannas, and forests (Hunt 2011). Trees are an essential habitat component. Leopards are solitary, nocturnal, and territorial (Hunt 2011).

Home ranges are about 13–35 km² (Hunt 2011). Ambush predators, leopards prey primarily on medium-sized ungulates, especially deer (Family Cervidae) (Hanssen *et al.* 2017). They also scavenge prey taken by other carnivores. These carcasses are often cached in trees beyond the reach of smaller, more numerous predators (Stein *et al.* 2016). Adult leopards have few natural predators (Hunt 2011). The total population size of the leopard is unknown. In southern Africa, a regional range loss of approximately 21% has been reported (Stein *et al.* 2016). Given their larger body size, males are more desirable and thus more susceptible than females to being harvested by trophy hunters (Braczkowski *et al.* 2015). In general, the current population trend is declining due to harvest and habitat loss and fragmentation (Stein *et al.* 2016).

In 1975, the leopard as *Panthera pardus* was included in CITES Appendix I (UNEP 2020). In accordance with Resolution Conf. 10.14 (Rev. CoP16) on *Quotas for leopard hunting trophies and skins for personal use*, there are numerical limits to the quantity of trophies and skins from some sub-Saharan countries that have been approved by the CITES Parties that can be traded annually (CITES 2013).

In 1970, the leopard as *Panthera pardus* with (three subspecies) was listed as Endangered on the *United States' List of Endangered Foreign Fish and Wildlife*, the precursor to the Endangered Species Act of 1973, as amended (Service 1970). This listing was revised in 1972 with the three subspecies being deleted as separate listings and all leopard subspecies included with the species listing (*Panthera pardus*; Service 1972). This listing was modified in 1982 when certain populations were classified as Threatened (Service 1982; “In Africa, in the wild, south of, and including, the following countries: Gabon, Congo, Zaire, Uganda, Kenya”). The leopard currently is subject to a 90-day status review (Service 2016, 2017, 2020).

In 2016, the African leopard as *Panthera pardus* ssp. *pardus* was categorized as Vulnerable A2cd (ver 3.1) by the IUCN Red List (Stein *et al.* 2016). This rangewide finding was based on loss of habitat and prey, and exploitation. These conservation threats are not well understood, have not ceased, and are likely to continue (Stein *et al.* 2016).

The leopard is part of a joint initiative by the Convention on Migratory Species (CMS) and CITES: Joint CMS-CITES African Carnivores Initiative (CMS 2017a,b). Recognizing the potential benefits of working together, the two organizations have agreed to conduct joint activities addressing shared species and issues of common interest. In this regard, the two organizations have prioritized actions on the leopard, as well as the African lion (*Panthera leo*), cheetah (*Acinonyx jubatus*), and wild dog (*Lycaon pictus*). The conservation threats to be addressed include: habitat loss and fragmentation, conflict with humans, depletion of the prey base, and unsustainable or illegal trade practices. Specific joint actions are being developed and will be implemented over the next several years (CMS 2017a). These actions include cooperative conservation programs for carnivores in the several range States, as well as specific conservation activities (e.g., illegal trade analyses, biological monitoring, and capacity building).

Leopards inhabit most of Namibia, except for the highly-populated northern region, the arid southeast farmlands, and the desert coast (IUCN/SSC Cat Specialist Group 2017:28–29; CITES 2018c:3–4). Approximately 77% of the countryside, about 570,000 km², provides suitable leopard habitat (Jacobson *et al.* 2016, Supplement, page 32). In Namibia, the key threat to

leopard conservation is excessive off-take (illegal) of problem-causing animals due to human-wildlife conflicts (recently ca. 70–110 leopards per year; CITES 2018c:7). These leopards usually are taken by the affected livestock owner (IUCN/SSC Cat Specialist Group 2017:116). Habitat loss, more so than in other range States, also negatively affects leopards in Namibia (Stein *et al.* 2016:13). These threats have not ceased (Stein *et al.* 2016).

A National leopard survey conducted by Stein *et al.* (2011), estimates leopard populations in Namibia to be approximately 14,154 individuals (CITES 2018c:5). This survey was conducted using camera-traps, questionnaires, spoor counts, and stakeholder interviews. The estimate takes into account high- (3.1 inds./100 km²), medium- (2.0 inds./100 km²), and low- (1.2 inds./100 km²) density estimates extrapolated over the surface areas of the corresponding habitats (IUCN/SSC Cat Specialist Group 2017:51). The combination of these components and the explanation about how they were derived suggest that the population estimate is reliable.

The national leopard population trend, according to the 2011 survey, is increasing (CITES 2018c:6). While this estimate (14,154 inds.) is much larger than earlier ones (e.g., 1,000–10,000 by Nowell and Jackson 1996:27), the current estimate could also be a more accurate approximation of a leopard population size that has not changed much over the years. This approximation, regardless, reflects the use of better survey techniques and the application of new relevant biological information (e.g., population densities and estimated area of occupancy; CITES 2018c:6). These results support the conclusion that the population trend is increasing.

Questions remain, however, about the quality of the biological data (CITES 2018c:7–8). In response, efforts are underway by the Government of Namibia to obtain detailed biological and ecological information about the species. Currently there is a national leopard census project underway (CITES 2018c:15). The results of this project will be used to inform the national leopard management strategy that is being developed. These efforts include field studies and a follow-up leopard survey to be completed in 2019 that will update the information available on the population status, density, and distribution of leopards in Namibia. These results will increase the quality of information available to wildlife managers.

BASIS FOR ADVICE

A. Applicant Information:

1. The applicant (Todd Shane Bockwoldt; Chesapeake, Virginia) requests authorization to import one leopard (*Panthera pardus pardus*) personal, sport-hunted trophy taken from the wild in Namibia.
2. The purpose of the proposed import is personal use. The leopard was taken from the wild at/near: Khomas Region, Farm Heusis No. 329 (near Windhoek), Namibia; with Professional Hunter: Steven Philip Hennings; with Outfitter: Khomas Highland Hunting Safaris; during a hunt on: October 31, 2019. The leopard was harvested in accordance with Namibia, Ministry of Environment and Tourism, Export Confirmation Certificate and Permit to Hunt for Trophies No. XXX [Tag # NAPP 04/250 (2019); copies were submitted along with the application].

B. Namibia Information:

3. Leopards in Namibia are managed under a sustainable use program that includes trophy hunting and are the beneficiary of several protective measures. Under national legislation in Namibia, the leopard is listed as Protected Game (Nature Conservation Ordinance 4 of 1975, Controlled Wildlife Products and Trade Act, 2008) (CITES 2018c:8). Under this legislation, no person may kill, hunt, or possess a leopard, or trade in leopard products without a permit. However, owners or occupiers of land may kill leopards in defense of human life or to protect their livestock and must report the killing to the Ministry of Environment and Tourism (CITES 2008c:8). Leopards are also protected under other legislation that provides for stiff penalties for illegal possession, poaching, and trade in controlled wildlife products (see: IUCN/SSC Cat Specialist Group 2017:144–148). Despite these measures, many leopards are killed illegally.

4. Namibia has a well-established leopard trophy-hunting system (CITES 2018c:8). Several measures regulate the actual take of the trophy leopard, while other measures regulate the process under which leopard trophies are acquired. With regard to actual take, for example, hunts are conducted under the supervision of registered hunting guides. In addition, only adult, free ranging male leopards with a minimum skull measurement of 32 cm may be harvested. Based on an assessment of leopard skull size of trophies taken during 2004–2017, trophy quality is stable with skull size ranging 35–40 cm. This is well above the cut-off limit of 32 cm (CITES 2018c:12–13). Other restrictions also apply, for example: the export of specimens from leopards categorized as problem animals and destroyed is not allowed (CITES 2018c:8). These measures provide a measure of control over which leopards are harvested or exported.

5. The quantity of leopards killed as problem animals in Namibia is greater than the quantity taken as trophy hunted animals (IUCN/SSC Cat Specialist Group 2017:116–117). This situation may present management challenges because less than 50% of problem animal kills are reported to government wildlife officials who manage trophy hunting. Accurate estimates of problem-animals mortality are essential to management of the leopard trophy hunting system.

6. According to the U.S. Department of State (State 2018), Namibia uses a rigorous, science-based system for quota setting for hunting in communal conservancies. This practice ensures wildlife sustainability. The quota process begins by combining hunting data from the previous year with current information for the species. An initial quota is adjusted taking into account five factors that are indicated on a Quota Setting Sheet (e.g., population estimate, species status, and population trend). The quota setting process is a team effort by local conservancy committee members, the Ministry of Environment and Tourism, and conservation NGOs. Initial data compilation takes about 6 months.

7. The State Department (2018) reports that results of the quota setting process are confirmed through site visits by technical advisors to the conservancy. A preliminary quota based on annual population growth rate of the species is developed during a day-long discussion at the conservancy with team members. This preliminary quota is submitted to local ministry representatives for review and comment. Once the quota request sheet is agreed upon and signed by the respective parties, it is submitted to central ministry representatives for final approval.

Throughout the year, monitoring of species utilization and benefits continues. At the end of the year, an annual report is generated for each conservancy. These results inform the next quota setting cycle.

8. With regard to processes under the trophy hunting system, the overall harvest quota is allocated among hunting concessions taking into account the size of the parcel and any relevant scientific information such as estimated population size and habitat (CITES 2018c:9). Larger parcels with healthier leopard populations, supported by monitoring results, are awarded higher quotas. In the absence of population estimates, trophy quality and trend assessments are used as a guide (CITES 2018c:9).

9. Leopard off-take is well monitored (CITES 2018c:9). An individual leopard hunting permit, for example, must be obtained prior to the hunt. This permit is only valid for a specific site and time period (CITES 2018c:9). At least 7 days prior to a hunt, the hunting operator must give notice to the Ministry of Environment and Tourism. The results of the hunt must be reported within 72 hours regardless of the success of the outing (CITES 2018c:9). The hunting guide must also submit a detailed leopard record sheet (CITES 2018c:10). These measures assist ministry officials to track trophy hunts.

10. Additional tracking measures also apply to the monitoring system. All harvested leopard trophies, for example, must be presented to the Ministry of Environment and Tourism for inspection and tagging (CITES 2018c:10). This step is compulsory for the issuance of a CITES Export Permit. All skulls are also photographed and measured in order to assess age and physical condition. Small, young, or unhealthy leopards (for instance, due to disease or injury) should not be harvested. These measures assist managers to ensure that only adult male leopards that are in good condition and meet the minimum size threshold are harvested and exported (CITES 2018c:12–13).

11. According to Namibia (CITES 2018c:15–16), the leopard population is stable, increasing in size, and widely distributed. The trophy hunting program is strictly controlled. In addition, the trophy quality analysis suggests that larger leopards are being harvested, the annual quota of 2.4% of the total population is low and harvest management practices are good. Based on these circumstances, Namibian officials have concluded that their trophy hunting is sustainable and non-detrimental to the leopard population (CITES 2018c:16).

C. CITES Export Quota Program

12. Within the context of CITES, Namibia initially had an approved export quota of 100 individuals (CITES 2018a,b). That quota was modified in 2004 and increased to the current total of 250 leopards per year (UNEP 2020). Although this quota was increased, actual hunting trophy exports have been less. During 2004–2017, on average 142 leopards were harvested per year (about 56% of the annual quota; CITES 2018c:11). When the quota of 250 leopards was reached in 2008, Namibia instituted a temporary harvest moratorium, assessed population data, evaluated their hunting management strategy, and ultimately revised their hunting regulations. The quota of 250 leopards was maintained. Under the new regulations, hunting of female leopards and use of dogs were outlawed, and individual operator harvest limits were set. During

2008–2010, following the implementation of these new regulations, the number of leopard trophies harvested declined precipitously, but subsequent harvest levels have recovered to about 140–160 leopards per year (CITES 2018c:11–12).

13. Since 2006, according to UNEP-WCMC (2020), reported gross exports have averaged approximately 162 trophies annually and 8 skins annually.

14. Given that leopard export quotas are developed using various methods, the Parties at CoP17 adopted four interrelated decision on Quotas for leopard hunting trophies (see AC29 Doc. 16; CITES 2017a,b). According to Decision 17.114:

Parties, which have quotas, established under Resolution Conf. 10.14 (Rev. CoP16) on *Quotas for leopard hunting trophies and skins for personal use* are requested to review these quotas, and consider whether these quotas are still set at levels which are non-detrimental to the survival of the species in the wild, and to share the outcomes of the review and the basis for the determination that the quota is not detrimental, with the Animals Committee at its 30th meeting (July 2018).

15. The results of these reviews were considered by the Animals Committee at AC30 (CITES 2018d). During this time, a working group reviewed information submitted by leopard range states and made recommendations concerning quotas for 12 African countries to the Animals Committee. For Namibia:

“The WC recommends to the Animals Committee to inform the Standing Committee that it considers that the quotas for Leopards for Namibia, as mentioned in Resolution Conf. 10.14 (Rev. CoP16), are set at levels which are non-detrimental to the survival of the species in the wild.”

16. The Animals Committee adopted this recommendation (CITES 2018e:6).

17. At the 70th meeting of the Standing Committee (SC70; Sochi, October 2018), the Chair of the Animals Committee submitted a document SC70 Doc. 55 on Quotas for leopard hunting trophies (*Panthera pardus*): Report of the Animals Committee. In the document, the Animals Committee informed the Standing Committee of the above recommendation. The Standing Committee noted the evaluation of the Animals Committee concerning the quotas for Namibia in Resolution Conf. 10.14 (Rev. CoP16) and invited the Secretariat to propose to the Conference of the Parties draft amendments to Resolution Conf. 9.21 (Rev. CoP13) on Interpretation and application of quotas for species included in Appendix I concerning approaches to review quotas for Appendix-I species, taking into consideration the recommendations of the Animals Committee in paragraph 5 f) of document SC70 Doc. 55 and opportunities to provide assistance to range States (CITES 2018f). These results were taken up by the 18th meeting of the Conference of the Parties in Geneva, Switzerland, August 17 – 28, 2019, under document CoP18 Doc. 46 on *Quotas for Leopard Hunting Trophies*.

18. Based on the discussions regarding Doc. 46 at CoP18, the Chair of Committee I established a working group to consider the revision of Resolution Conf. 9.21 (Rev. CoP11) in Annex 2 and

draft decisions 18.AA to 18.HH in Annex 3 to document CoP18 Doc. 46. The working group, chaired by the United Kingdom of Great Britain and Northern Ireland, also included Botswana, the Central African Republic, Chad, Ethiopia, the European Union, Finland, Germany, Israel, Liberia, Malawi, Namibia, Senegal, South Africa, Spain, Uganda, the United States of America, and Zimbabwe; United Nations Environment Programme (UNEP); International Council for Game and Wildlife Conservation; International Union for Conservation of Nature (IUCN); and Cheetah Conservation Fund, Conservation Force, Dallas Safari Club, European Federation of Associations for Hunting and Conservation, Humane Society International, International Professional Hunters Association, IWMC-World Conservation Trust, Safari Club International, San Diego Zoo Global, World Wildlife Fund and Zoological Society of London (CITES 2019a). The working group prepared document CoP18 Com. I. 10 on the basis of document CoP18 Doc. 46 after discussion in the second session of Committee I (CITES 2019b). At the conclusion of CoP18 (i.e. plenary), the amendments to Resolution Conf. 9.21 (Rev. CoP17) on *Interpretation and application of quotas for species included in Appendix I* contained in the in-session document CoP18 Com. I. 10 had been accepted in Committee I and were adopted. The eight draft decisions in Annex 3 to document CoP18 Doc. 46 had also been accepted in Committee I and were adopted. Decisions 17.114 to 17.117 were deleted (CITES 2019c).

19. Therefore, based on the above information, we find that the current harvest levels are sustainable. As such, we advise that this import is likely to be for purposes that are not detrimental to the survival of the species.

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Literature Cited

Braczkowski, A.R., G.A. Balme, A. Dickman, D.W. Macdonald, J. Fattebert, T. Dickerson, P. Johnson, and L. Hunter. 2015. Who bites the bullet first? The susceptibility of Leopards *Panthera pardus* to trophy hunting. PloS one 10, no. 4 (2015): e0123100. Available online at: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0123100>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2013. Conf. 10.14 (Rev. CoP16) on Quotas for leopard hunting trophies and skins for personal use. Available online at: <https://cites.org/sites/default/files/document/E-Res-10-14-R16.pdf>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2017a. Summary Record. AC29 summary record. Available online at:

<https://cites.org/sites/default/files/eng/com/ac/29/sum/E-AC29-SR.pdf>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2017b. CITES Secretary-General's statement for the Twelfth meeting of the Conference of the Parties to the Convention on Migratory Species, Opening Plenary - Manila, Philippines. Available online at: https://cites.org/eng/news/sg/CITES_SG_opening_speech_Twelfth_CoP_Convention_on_Migratory_Species_23102017; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2018a. CITES National Export Quotas: *Panthera pardus*. Available online at: https://cites.org/eng/resources/quotas/export_quotas?field_party_quotas_tid=Mozambique&field_full_name_tid=Panthera+pardus&field_export_quotas_year_value%5Bvalue%5D%5Byear%5D=2017&items_per_page=50&=Apply; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2018b. Quotas for leopard hunting trophies. AC29 Doc. 16. Available online at: <https://cites.org/sites/default/files/eng/com/ac/29/E-AC29-16.pdf>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2018c. Export Quota Review – Namibia. AC30 Doc. 15 Annex 2. 19 pp. Available online at: <https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-15-A2.pdf>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2018d. Quotas for leopard hunting trophies. AC30 Com. 10. 3 pp. Available online at: <https://cites.org/sites/default/files/eng/com/AC/30/com/E-AC30-Com-10.pdf>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2018e. Executive Summary. AC30 Sum. 3. 6 pp. Available online at: <https://cites.org/sites/default/files/eng/com/AC/30/sum/E-AC30-ExSum-03.pdf>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2018f. Executive Summary. SC70 Sum. 10 (Rev. 1). 3 pp. Available online at: <https://cites.org/sites/default/files/eng/com/sc/70/exsum/E-SC70-Sum-10-R1.pdf>; accessed on: January 22, 2020.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2019a. Summary record of the second session for Committee I (CoP18 Com. I. Rec. 2. Available online at: https://cites.org/sites/default/files/eng/cop/18/Com_I/SR/E-CoP18-Com-I-Rec-02.pdf; accessed on: January 22, 2020 .

- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2019b. In-session document from Committee I on *Quotas for leopard hunting trophies* (Document 46) (CoP18 Com. I. 10). Available online at: https://cites.org/sites/default/files/eng/cop/18/Com_I/E-CoP18-Com-I-10.pdf; accessed on: January 22, 2020.
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). 2019c. Summary record of the third plenary session (CoP18 Plen. Rec. 3 (Rev. 1)). Available online at: <https://cites.org/sites/default/files/eng/cop/18/Plen/SR/E-CoP18-Plen-Rec-03-R1.pdf>; accessed on: January 22, 2020.
- CMS (Convention on Migratory Species). 2017a. Joint CMS-CITES African Carnivores Initiative. UNEP/CMS/COP12/Doc.24.3.1.1; 22 May 2017. Available online at: http://www.cms.int/sites/default/files/document/cms_cop12_doc.24.3.1.1_african-carnivores-initiative_e.pdf; accessed on: January 22, 2020.
- CMS (Convention on Migratory Species). 2017b. Decisions of the Conference of the Parties to CMS in Effect After its 12th Meeting. 25 pp. Available online at: http://www.cms.int/sites/default/files/document/cms_cop12_decisions_e_0.pdf; accessed on: January 22, 2020. [See: Decisions 12.55–12.60; p. 15].
- Hanssen, L., P. Funston, B. Alfred, and S. Alfred. 2017. Large Carnivore Survey; Bwabwata National Park, Namibia, August 2017. Kwando Carnivore Project, Kyaramacan Trust, Panthera, and Namibia Ministry of Environment and Tourism. 9 pp. Available online at: http://www.the-eis.com/data/literature/Report_Bwabwata%20Large%20Carnivore%20Survey_2017.pdf; accessed on: January 22, 2020.
- Hunt, A. 2011. "*Panthera pardus*" (On-line), Animal Diversity Web. Accessed January 22, 2020, at http://animaldiversity.org/accounts/Panthera_pardus/
- IUCN/SSC Cat Specialist Group. 2017. Regional Assessment for the leopard in selected countries of Africa. Muri bei Bern, Switzerland. 207 pp.
- Jacobson, A.P., *et al.* 2016. Leopard (*Panthera pardus*) status, distribution, and the research efforts across its range. PeerJ, 4, e1974. Available online at: <https://peerj.com/articles/1974/>; accessed on: January 22, 2020.
- Nowell, K., & Jackson, P. (Eds.). 1996. Wild cats: status survey and conservation action plan (Vol. 382). Gland: IUCN. 382 pp. Available online at: <https://portals.iucn.org/library/efiles/documents/1996-008.pdf>; accessed on: January 22, 2020.
- Service (U.S. Fish and Wildlife Service). 1970. Part 17: Conservation of Endangered Species and Other Fish or Wildlife. Federal Register 35(106):8491–8498. [June 2, 1970]

- Available online at: https://ecos.fws.gov/docs/federal_register/fr21.pdf; accessed on: January 22, 2020.
- Service (U.S. Fish and Wildlife Service). 1972. Part 17: Conservation of Endangered Species and Other Fish or Wildlife: List of Endangered Foreign Fish and Wildlife. Federal Register 37(62):6476. [March 30, 1972] Available online at: https://ecos.fws.gov/docs/federal_register/fr29.pdf; accessed on: January 22, 2020.
- Service (U.S. Fish and Wildlife Service). 1982. Endangered and Threatened Wildlife and Plants: Threatened Status for the Leopard in Southern Africa. Federal Register 47(19):4204–4211. [January 28, 1982] Available online at: https://ecos.fws.gov/docs/federal_register/fr573.pdf; accessed on: January 22, 2020.
- Service (U.S. Fish and Wildlife Service). 2016. Endangered and Threatened Wildlife and Plants: Notice of petition findings and initiation of status reviews. Federal Register 81(230):86315–86318. [November 30, 2016] Available online at: <https://www.gpo.gov/fdsys/pkg/FR-2016-11-30/pdf/2016-28513.pdf>; accessed on: January 22, 2020.
- Service (U.S. Fish and Wildlife Service). 2017. Endangered and Threatened Wildlife and Plants: Notification of petition findings and initiation of status reviews. Federal Register 82(243):60362–60366. [December 20, 2017] Available online at: <https://www.gpo.gov/fdsys/pkg/FR-2016-11-30/pdf/2016-28513.pdf>; accessed on: January 22, 2020.
- Service (U.S. Fish and Wildlife Service). 2020. ECOS: *Panthera pardus*. Available online at: <https://ecos.fws.gov/ecp0/profile/speciesProfile.action?scode=A01J>; accessed on: January 22, 2020.
- State (U.S. Department of State). 2018. Namibia: Meticulous Analysis Produces Sustainable Hunting Quotas. Department of State; Cable; 18 WINDHOEK 326; April 23, 2018. 3 pp.
- Stein, A.B. *et al.* 2011. Namibian National Leopard Survey; 2011 Final Report. Ministry of Environment and Tourism. Internal Report. Windhoek, Namibia. [Not seen; cited by CITES 2018c.]
- Stein, A.B. *et al.* 2016. *Panthera pardus*. The IUCN Red List of Threatened Species 2016: e.T15954A102421779. <http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T15954A50659089.en>; accessed on: January 22, 2020. See also: <http://oldredlist.iucnredlist.org/details/15954/0>.
- UNEP. 2020. CITES Species Database: *Panthera pardus*. Available online at: <http://www.cites.org/eng/resources/species.html>. Downloaded on: January 22, 2020.

UNEP-WCMC. 2020. CITES Gross Export Trade Report: *Panthera pardus*. Available online at: http://www.unep_wcmc.org/citestrade/report/cfm. Downloaded on: January 22, 2020. See also: <https://trade.cites.org/>; accessed on: January 22, 2020.

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