Trophy Hunting
by the Numbers

The Role of the United States in International Trophy Hunting

Import and export of hunting trophies of CITES-listed mammal species between 2014 and 2018

THE HUMANE SOCIETY OF THE UNITED STATES
HUMANE SOCIETY INTERNATIONAL
HUMANE SOCIETY LEGISLATIVE FUND

CONTENTS

THE HUMANE SOCIETY OF THE UNITED STATES

HUMANE SOCIETY INTERNATIONAL

HUMANE SOCIETY LEGISLATIVE FUND

The U.S. is the world's **largest importer of hunting trophies** of mammal species protected under the Convention on International Trade in Endangered Species. The U.S. imported over **72,600 hunting trophies** of CITES-listed mammals **between 2014 and 2018.** In addition, **over 10,000** of those trophies were also from species listed as **Threatened or Endangered under the U.S. Endangered Species Act.**

The U.S. Fish and Wildlife Service continue to authorize the import and export of hunting trophies of Threatened and Endangered species despite strong public opposition. According to a 2022 survey, **76% of Americans oppose trophy hunting** and 65% oppose the importation of hunting trophies of species listed under the ESA.

Executive Summary

This report provides details on the role of the United States in the international trade of hunting trophies of mammal species protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) during the most recent five-year period for which data are available (2014-2018). Parties to the Convention categorize species under three appendices by which they are afforded different levels or types of protection from over-exploitation through international trade. Appendix I lists species that are threatened with extinction and that are or may be affected by trade; as such, international trade in specimens of species listed on Appendix I is subject to particularly strict regulation in order to not further endanger their survival and is only authorized in exceptional circumstances and never for primarily commercial purposes. Appendix II lists species that may become threatened with extinction unless trade is closely controlled. Appendix II also includes other species that look like species listed on Appendix I. The trade in such species is regulated through export permitting requirements that mainly ensure the trade is legal and will not be detrimental to the survival of the species in the wild. Appendix III lists species at the request of a CITES member that regulates trade in the species at the national level. An Appendix III listing reflects the need for the cooperation of other countries to regulate trade at the international level; international trade in such species is regulated through permitting requirements[1].

To conduct this research, we examined mammal trophy import and export trade data obtained from the United Nations Environment Programme World Conservation Monitoring Centre CITES Trade Database. This report examines only trade of CITES-listed mammals and does not include all species that are traded as trophies.

Key findings in this report include:

- **Between 2014 and 2018, the U.S. was the world's largest importer of hunting trophies from CITES-listed mammals, having imported 75% of the global total of CITES-listed mammal trophies imported.** At least 97,103 trophies from CITES-listed mammals were imported globally during this period.
- The U.S. reported importing 72,617 trophies over the period, or more than 14,500 on average per year, from 59 different countries.
- **Trophies of almost 100 different species were imported into the U.S. during the five years examined.** The most common species imported were the American black bear (*Ursus americanus*), chacma baboon (*Papio ursinus*), Hartmann's mountain zebra (*Equus zebra hartmannae*), gray wolf (*Canis lupus*), lion (*Panthera leo*), red lechwe (*Kobus leche*), leopard (*Panthera pardus*), vervet monkey (*Chlorocebus pygerythrus*), blackbuck (*Antilope cervicapra*) and brown bear (*Ursus arctos*).
- The U.S. imported 5,044 trophies of the four CITES-listed species in the "Africa's Big Five" over the period: 2,169 African lion trophies, 1,007 African elephant (*Loxodonta africana*) trophies, 1,639 African leopard trophies, and 248 rhinoceros trophies (244 southern white rhinoceros (*Ceratotherium simum simum*) and four black rhinoceros (*Diceros bicornis*)).
- **Over 9,000 trophies of species whose conservation status is classified in one of the threatened categories by the International Union for Conservation of Nature's Red List were imported into the U.S.,** including four trophies of Critically Endangered black rhinoceros, 1,153 trophies from six species listed as Endangered (87% of which were African elephant trophies), and 8,106 trophies from nine species listed as Vulnerable.
- **The U.S. imported 10,484 trophies from species that are listed as Threatened or Endangered under the Endangered Species Act,** including 2,762 trophies from the Threatened Hartmann's mountain zebra and 2,169 lion trophies, the two of which are the most-imported species listed under the ESA. Lions are listed as either Endangered or Threatened under the ESA, depending on their population.
- **Most trophies imported into the U.S. originated in Canada and South Africa over the period,** with Canada comprising 68% (or 49,154 trophies) and South Africa 14% (or 9,948 trophies) of those imported. Namibia, Zimbabwe, Argentina, Tanzania, Mexico, Zambia, Russia and Tajikistan were also in the top 10 countries from which the U.S. imported trophies.
- The U.S. imported 44,888 American black bear trophies from Canada from 2014 to 2018. Because of a bilateral trade agreement between the U.S. and Canada, American black bear trophies imported into the U.S. from Canada do not require an export permit. Canada does not always report exports to the CITES Trade Database. A huge discrepancy in the number of American black bear trophies that the U.S. reported importing (44,888 trophies) and the number that Canada reported exporting (11,937 trophies) skews datasets that only examined export trade data.
- Ninety-six percent of the trophies imported into the U.S. over the period were from wild animals, while 3% were from animals either born or bred in captivity, and 1% were from other sources.
- The most common wild-sourced species imported into the U.S. over the period were American black bear (comprising 64% of the total number of wild-sourced trophies imported), chacma baboon, Hartmann's mountain zebra, gray wolf and leopard. A total of 69,738 wild-sourced trophies, or 13,948 per year on average, were imported.
- A total of 2,080 captive-sourced trophies were imported over the period. The most common captive-sourced species imported into the U.S. over the period was the African lion (1,172 trophies), accounting for 56% of the total U.S. imports of captive-sourced trophies from CITES-listed mammals. The other top five captive-sourced trophies imported over the period were the red

lechwe (654 trophies), Barbary sheep (*Ammotragus lervia*) (79 trophies), bighorn sheep (*Ovis canadensis*) (34 trophies) and hog deer (*Axis porcinus*) (28 trophies).

- **The U.S. was the 10th highest global exporter of CITES-listed mammal trophies between 2014 and 2018, having exported 1,169 trophies, or 234 per year on average.** The results indicate a significantly high level of imports to the U.S., while exports from the U.S. were relatively low. Considering this in conjunction with other sources that demonstrate hunting is a major activity on U.S. soil, it is likely that the U.S. is also the largest consumer of hunting trophies of mammals that originate in the U.S.
- Canada imported the most trophies from the U.S. (43%) and Mexico was the second largest importer of U.S. trophy exports (10%).
- The most common species exported as trophies from animals originating in the U.S. included native species—brown bear, American black bear, gray wolf, bobcat (*Lynx rufus*) and mountain lion (*Puma concolor*)—as well as non-native species that were captive-bred or captive-born—Barbary sheep, blackbuck, addax (*Addax nasomaculatus*), Scimitar oryx (*Oryx dammah*) and nilgai (*Boselaphus tragocamelus*).
- **The U.S. exported 122 trophies of species listed in one of the threatened categories of the IUCN Red List (95 Vulnerable, three Endangered and 24 Critically Endangered), and 48 trophies of species with U.S. origin that are listed as Threatened or Endangered under the ESA.**

Based on the trade data analyzed, the global trophy hunting industry is largely driven by U.S. trophy hunters—which means that actions taken by the U.S. government and citizens will be pivotal in directing the future of the industry. The most important trade path for trophies was between the U.S. and Canada, which was largely driven by the enormous number of American black bear trophies imported to the U.S. from Canada. Canada was also a major importer of trophies of native U.S. species and was the No. 1 importer of American black bear, brown bear, mountain lion and gray wolf trophies that originated in the U.S.

Although the U.S. exported only a fraction of the trophies imported globally, trophy hunting is still a major activity on U.S. soil. Of the species exported as trophies with U.S. origin, 18 of the 27 species were non-native, and 29% of trophies were non-native. There is a sizable captive hunting industry in the U.S. for native and non-native species; the Humane Society of the United States estimates there are roughly 1,000 captive hunting facilities in the U.S., with about half of the operations residing in Texas[2]. In addition, a substantial number of wild, native animals are killed for trophies in the U.S. but not exported, and consequently are not included in the data in this report. According to state hunting data collated by the HSUS from state agency websites and requests, when considering domestic hunting of American black bears, mountain lions and gray wolves, an additional 46,648 CITES-listed mammals were killed as trophies between 2014 and 2018 but were not recorded in global trophy trade data as they were not exported.*

We are living in a period of unprecedented human-induced biodiversity loss, and direct exploitation—including hunting—is a major driver. The direct mortality and additional indirect mortality and effects caused by trophy hunting compound with other threats to species survival, such as poaching, conflict with humans and habitat loss (e.g.,[3,4,5,6,7,8,9,10,11,12,13,14]). Ultimately, this report determined that American trophy hunters had the most significant influence over the scope of wildlife trophy hunting worldwide in the context of the number of CITES-listed mammals traded as trophies between 2014 to 2018. Ending the import of hunting trophies of mammal species listed under CITES appendices and the ESA into the U.S. would consequently have a significant impact in reducing the number of animals trophy hunted annually around the world and would be an important intermediary step to banning all hunting trophy imports derived from this inhumane and harmful practice.

* Calculated from state agency websites and requests.

Introduction

A hunting trophy is the dead animal, or the parts of an animal such as the head, skin or any other body part that the hunter keeps as a souvenir, decoration or display to represent the success of their hunt. Typically, trophies take the form of a taxidermied animal head mounted on the wall or the animal's body parts as household décor, such as a giraffe's skin as a rug, the skull of a hippopotamus as a table stand, or an elephant's foot as a trash can. However, other appendages, including genitals, claws, ears, feet, tails, teeth and bones, can also be taken as trophies or used for jewelry and other trinkets.*

Trophy hunting is **not the key to conservation** and can be **replaced by ethical revenue-generating alternative industries.**

Competition and status fuel trophy hunting

Trophy hunters typically fall within middle- to upper-income classifications as trophy hunting can require a lot of money: As much as US$400,000 has been paid at auction by an American trophy hunter to kill a Critically Endangered black rhinoceros (*Diceros bicornis*) in Namibia, and this figure does not include the cost of international travel, taxidermy and shipping the trophy home[15]. Many scientists suggest that trophy hunting is a way for the hunter to glamorize the killing of an animal to show off to others[16] and to demonstrate male virility, prowess and dominance[17,18,19] and that taxidermy animals can also symbolize a hunter's prowess[20].

These trophies provide a means to display one's wealth; it costs several hundred dollars in taxidermy costs for a head and shoulder trophy mount and several thousand dollars for a taxidermist to provide a stuffed body[20].

Rarity—that is, a species' at-risk conservation status on the IUCN's Red List—leads to additional pressure on the species by providing "an intrinsic value" and an "incentive for exploitation"[21]. Rarity and high prices increase trophy-hunting demand, not lessen it[21,22], while technology and social media may reinforce trophy-seeking behavior by providing a platform to boast and share photos with a large audience[16], especially when sharing kills of large carnivores[23]. Ultimately, the trophy hunting industry works to drive demand for trophies and other parts and products of Threatened and Endangered species across the globe through conventions, community engagement, social media and competitions.

Trophy hunting differs from the most common form of hunting, which is to kill an animal to obtain meat for human consumption. Unlike subsistence hunters, it is common for trophy hunters to kill animals to compete to obtain prizes and awards and to have their kills memorialized in "record books" kept by trophy hunting industry organizations[24].

Some of these accolades and prizes are awarded for activities such as killing the largest animals, killing the most animals of a specified type or killing designated species with specified weaponry such as muzzle loaders or bows and arrows. Safari Club International's record book includes four different hunting award programs encompassing over 23 awards that range from a minimum of six to upward of 125 kills per award per hunter, five cumulative award programs and five lifetime achievement awards, demonstrating that a core motivation behind trophy hunting is competition[25].

* Note, this report focuses only on body parts that could be equated to individual animals. See "Methodology."

Animal welfare concerns

Industries centered around entertainment that result in animal cruelty are inexcusable, and industries such as cockfighting, dogfighting and horse soring have been the subject of policy restrictions and prohibitions in recent decades. Trophy hunting is one such industry as participants willfully ignore animal welfare by using cruel and unsporting practices centered around entertainment and bragging rights.

Since the primary purpose is to obtain a body or parts to display, trophy hunters prioritize bullet placement that does not ruin the appearance of a trophy rather than placement that would ensure a quicker death for the animal. Hunters are known to use bait to lure wildlife out of protected areas and dogs to chase animals up a tree where they can be more easily shot by the hunter.

Animals are also captive-bred and hand-reared to be shot in fenced areas once old enough—known as canned hunting—or are drugged, trussed up and moved to a different fenced area. These practices enable hunting outfitters to advertise "guaranteed kills."

The trophy hunting industry celebrates and incentivizes the killing of animals with novelty weapons not suited for a clean kill such as bows and arrows, muzzle loaders and handguns by offering them as prizes, promotions and record book categories for competitions.

Multiple instances of lengthy suffering by the target animals after being wounded have been documented, with the most famous example being a Zimbabwe lion (*Panthera leo*) known as Cecil who in 2015 was wounded and suffered for about 10 hours before being tracked and killed[26].

Trophy hunting's lack of benefits

Over the years, trophy hunters have exaggerated a series of "benefits" to justify killing animals for entertainment and bragging rights and to influence state, national and international policy. Their argument—that trophy hunting supports conservation and local communities through revenue generation—hinges on the premise that the economic profits generated outweigh any other negative impacts from trophy hunting, and that the removal of the industry would allegedly reduce local community revenue and incentives for conservation.

However, trophy hunting profits that may go to conservation work are minimal at best and wholly insufficient to mitigate the harmful biological impacts of the threats these species face, including trophy hunting. When determining whether trade in trophies should be permitted, it is critical that biological conservation science considerations remain the determining factor. The trophy hunting industry can be replaced by other, more ethical and lucrative forms of revenue for conservation and communities. Trophy hunting is not an effective and ethical contributor to conservation, tourism or sustainable development at home or abroad. Ultimately, trophy hunting hurts conservation goals.

Given the amount of money generated by the trophy hunting industry for outfitters and other industry recipients and the lack of external oversight, corruption of government officials and wildlife managers is a serious concern. In addition, studies have documented that local community members have very little authority and that most of the profits generated by trophy hunting stay within the industry while very little money trickles down to local communities (e.g.,[27,28,29,30].)

* See also *hsi.org/wp-content/uploads/assets/pdfs/economists-at-large-trophy-hunting.pdf.*

A recent report by Good Governance Africa, commissioned by HSI, examined South Africa's decision to elevate trophy hunting as a key element of its conservation strategy and determined that:

> ***South Africa's emphasis on trophy hunting as a conservation tool is based on flimsy empirical grounds and is at odds with the scholarly work that raises questions not only about trophy hunting's efficacy but also its likely harm. The government's apparent commitment to trophy hunting neither considers the opportunity costs associated with the practice, nor its negative externalities. That trophy hunting might generate some economic benefit is insufficient grounds on which to promote it as a conservation-enhancing mechanism, especially if that miniscule economic benefit comes at the cost of alternative, more sustainable forms of conservation-advancing revenue[31].***

The IUCN World Commission on Environmental Law Ethics Specialist Group raised additional legal and ethical concerns and called for a ban on the import of hunting trophies in a letter to the German government—the top importer of hunting trophies in the European Union—concluding that "trophy hunting is not a sustainable form of use and should be rejected"[32].

Most countries around the world do not have a significant trophy hunting industry presence yet have successful conservation programs. Trophy hunting is not the key to conservation and can be replaced by ethical revenue-generating alternative industries. Non-consumptive tourism can be significantly more profitable than trophy hunting tourism and does not have the same direct and indirect impacts as trophy hunting. For example, a single African elephant (*Loxodonta africana*) can generate over US$1,600,000 to travel companies, airlines and local economies when viewed in the wild over the duration of their life[33].

Conversely, trophy hunters pay one-time travel fees and one-time trophy fees of around US$20,000 to US$40,000 to kill a single African elephant. Once that elephant is dead, local economies, nations and their tourism industry have lost the opportunity for further income generation as well as other values attributed to the elephant, such as cultural and personal values and ecological benefits from enhanced habitat for other animals.

Risks to survival of Threatened and Endangered species

Trophy hunting is a form of unnatural selection that usually targets rare and charismatic species—species that have physical characteristics that are visually impressive, or species that are considered dangerous to hunt, especially carnivores such as bears, lions, leopards and wolves.

For example, adult male leopards (*Panthera pardus*) are the most sought-after demographic for leopard trophies due to their large size[34]. In their study of hundreds of photos of trophy hunters in hunting magazines, Kalof and Fitzgerald determined that trophy hunters preferred to pose with large male trophy animals[17]. However, large size and physical traits are often associated with holding territory and serve as important indicators of fitness potential to females who are choosing mates. In addition, larger animals are typically older, which means they may play key roles in their social groups.

These animals targeted as trophies often differ from those chosen by subsistence hunters who are motivated by the desire to hunt for meat or other utilitarian body parts—subsistence hunters don't kill animals for the purpose of a trophy. Removal of these target animals by trophy hunters, especially

in small populations, can have many direct and indirect effects such as local extirpation, population declines, reduced reproductive success, inbreeding, genetic erosion, loss of ecological and social knowledge necessary for survival, increased rates of infanticide, and altered physical and behavioral traits. These impacts can reduce long-term population viability and species survival.

Trophy hunting has a long history of being mismanaged and poorly regulated. Often management decisions are made without sufficient data on populations or consideration of relevant additional threats. Long-term monitoring of detailed population metrics is necessary to understand the full effects of trophy hunting.

However, long-term studies are rare, which means it's impossible to quantify the full impacts of trophy hunting on population size, social structure, ecological functioning, and interactions with other threats, such as poaching, which cannot be fully measured due to its cryptic nature. The ability to determine the biological sustainability of trophy hunting quotas depends on the quality of data used to estimate population metrics. Trophy hunting quotas should be based on the best available science; however, quota setting is often a politically motivated process with certain stakeholders being given an inappropriate amount of power and influence.

Role of the United States

Overall, the varied and extensive negative impacts of trophy hunting far outweigh any economic benefits, and through the work of countless governments, companies and organizations, we have the opportunity to embrace tourism and sustainable development alternatives that are ethical and more beneficial than trophy hunting to support conservation and local communities. It is consequently necessary to identify the major traders in hunting trophies worldwide in order to effect real change. Accordingly, HSI has published a series of reports analyzing global hunting trophy trade data to track the scope and recent trends of the trophy hunting industry and the countries with the highest engagement.

This report provides details on the role of the United States in the international trade of hunting trophies of mammalian species listed under CITES during the most recent five-year period for which data were available at the time of analysis (2014-2018). Due to the lack of transparency and data availability from the trophy hunting industry, no one knows the true total number of animals killed for trophies globally every year. However, we do have access to publicly available data on the international trade of hunting trophies of CITES-listed mammalian species.

To conduct this research, we examined wildlife trophy trade data to quantify, to the best extent possible, the number of CITES-listed mammals who were killed as trophies during this time period. However, this report examines only trade of CITES-listed mammals and does not include all species that are traded as trophies. This report also only examines the number of CITES-listed mammal species traded internationally as trophies, not the total number of animals killed. It is important to note that trophy hunting often involves the international movement of hunting trophies as hunters travel widely and want to bring their trophies back to their resident countries to display them. However, there is also trophy hunting that does not result in the international movement of the trophies, which is not covered by this report. For more information on the methodology used in this report, see page 64.

According to the findings of this report, Americans are the most prolific trophy hunters in the world, as the U.S. imported 75% of hunting trophies of mammalian species listed under CITES in global trade between 2014 and 2018. According to the most recent survey, as of 2016, American hunters made up only 4% of the U.S. population[35], with trophy hunters making up an even smaller portion than that.

Yet, American trophy hunters with disproportionate wealth and influence target animals under legal frameworks riddled with exemptions that enable the legal killing and trade of Threatened and Endangered species for entertainment and personal use.

The findings of this report demonstrate the sheer, unrivaled scope of American consumption of hunting trophies, especially of Threatened and Endangered species. This is an alarming signal that U.S. policymakers have the greatest responsibility to strengthen policies that will reduce the demand for and trade in hunting trophies, with a ban on the import of hunting trophies of mammal species listed under CITES appendices and the ESA as an important first step.

The purpose of this study is to ascertain the role of the United States in the international trade in hunting trophies.

Global trophy imports

Between 2014 and 2018, 97,103 trophies were imported globally from CITES-listed mammal species. The U.S. was by far the largest importer of hunting trophies of CITES-listed mammals, making up 75% of total global trophy imports (Table 1; Figure 1).

The U.S. imported 72,617 trophies from CITES-listed mammals, which is more than 14,524 trophies, on average, every year over the five-year period (Table 1). The European Union was the second largest importer, with a total of 14,912 trophy imports, or 2,982 on average per year, over the same time period, comprising 15% of the global total[36]. To reiterate, many more animals are killed and traded as trophies each year; these numbers only reflect trophies from CITES-listed mammals that were traded internationally for the study period.

Figure 1: Imports of trophies of CITES-listed mammals, by country

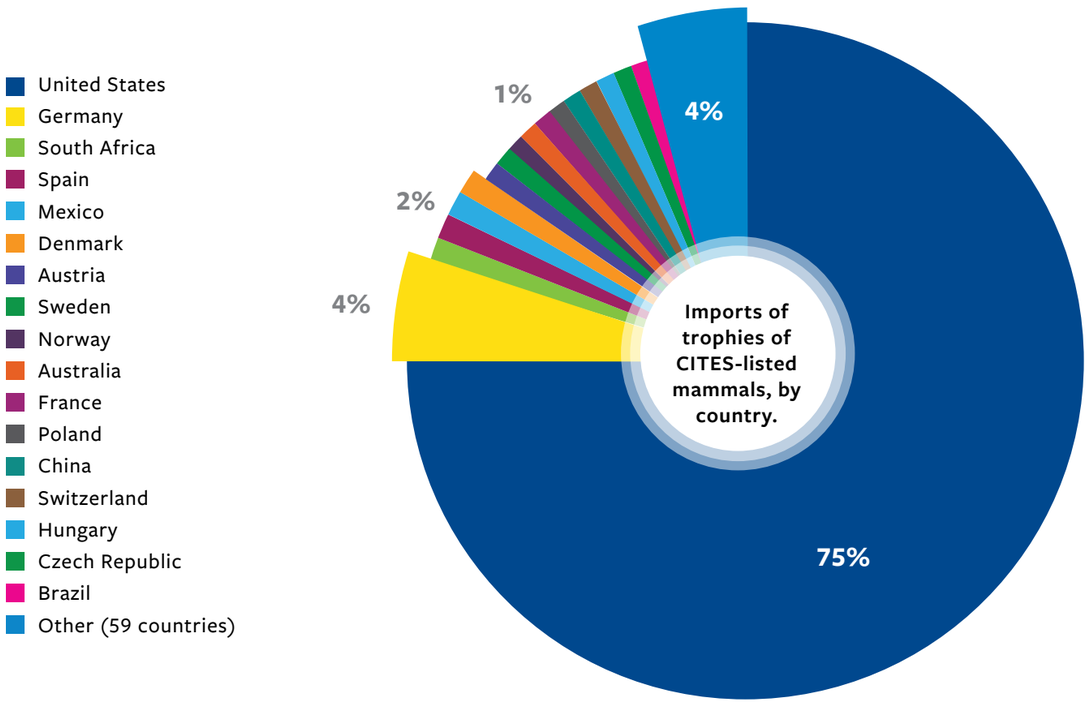


Table 1. Global importers of trophies

Species	2014	2015	2016	2017	2018	Average per Year	Grand Total	Percent of Grand Total
United States	12,683	14,793	14,326	13,505	17,310	14,524	72,617	**75%**
Germany	811	771	783	787	807	792	3,959	**4%**
South Africa	512	605	371	432	305	445	2,225	**2%**
Spain	367	397	394	436	525	424	2,119	**2%**
Mexico	581	345	357	398	379	412	2,060	**2%**
Denmark	303	231	393	334	409	334	1,670	**2%**
Austria	234	275	293	283	276	273	1,361	**1%**
Sweden	80	223	180	191	245	184	919	**1%**
Norway	270	123	175	148	115	167	831	**1%**
Australia	211	164	115	151	186	166	827	**1%**
France	136	180	144	97	195	151	752	**1%**
Poland	137	116	121	188	182	149	744	**1%**
China	226	289	88	109	28	148	740	**1%**
Switzerland	127	129	154	117	102	126	629	**1%**
Hungary	21	76	149	192	180	124	618	**1%**
Czech Republic	106	111	99	103	124	109	543	**1%**
Brazil	30	270	17	95	90	101	502	**1%**
Other (59 countries)	841	688	818	704	936	798	3,987	**4%**
Grand Total	**17,676**	**19,786**	**18,977**	**18,270**	**22,394**	**-**	**97,103**	**-**

Table based on importer reported quantities. Countries that represent less than 1% of grand total are collapsed into "Other."

United States trophy imports

72,617 CITES-listed wild mammal trophies imported from 59 countries

10,000+ of which are listed as Threatened or Endangered under the ESA

Top species imported

American black bear trophies: **45,048**

Chacma baboon trophies: **2,993**

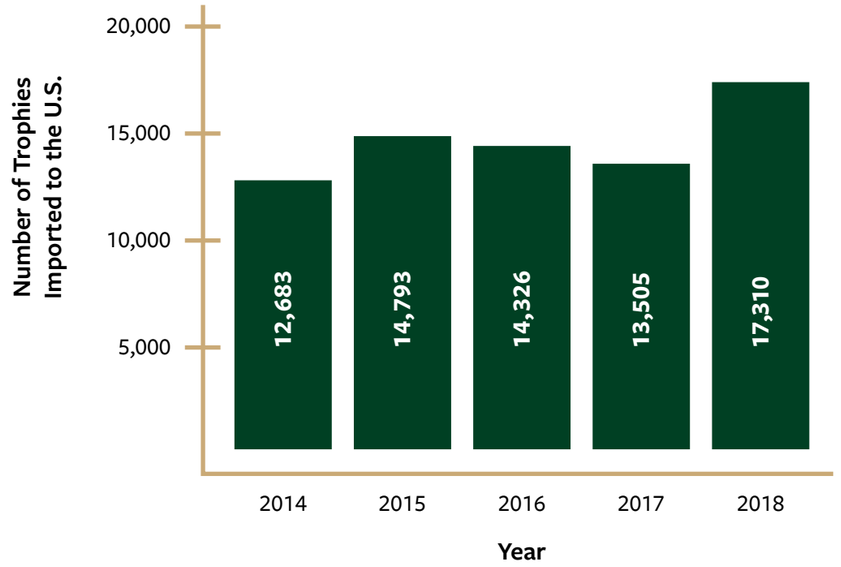
Hartmann's mountain zebra trophies: **2,762**

Gray wolf trophies: **2,180**

Lion trophies: **2,169**

The U.S. imported 72,617 trophies, or 14,524 per year on average, from 99 different CITES-listed mammal species (Table 2) from 59 countries during 2014-2018 (Table 3). These imports included 5,044 trophies of the four "Africa's Big Five" species that are included in the WCMC-CITES Trade Database: 2,169 African lion trophies, 1,007 African elephant trophies, 1,639 African leopard trophies and 248 black and white rhinoceros trophies (Table 2). In addition, the U.S. imported over 10,000 trophies of species listed as Threatened or Endangered under the ESA (Table 12).

Figure 2: Imports of trophies of CITES-listed mammals to the U.S. by year



Number of trophies imported by species

In total, 99 CITES-listed mammal species were imported as trophies into the U.S. from 2014 to 2018. The most common species was the American black bear (*Ursus americanus*) (imported primarily from Canada), which accounted for 62% of CITES-listed mammal trophies imported into the U.S. (Table 2). A total of 45,048 American black bear trophies, or 9,010 per year on average, were imported during the period. The other nine species rounding out the top 10 were the chacma baboon (*Papio ursinus*) (2,993 trophies), Hartmann's mountain zebra (*Equus zebra hartmannae*) (2,762 trophies), gray wolf (*Canis lupus*) (2,180 trophies), lion (2,169 trophies), red lechwe (*Kobus leche*) (1,689 trophies), leopard (1,640 trophies), vervet monkey (*Chlorocebus pygerythrus*) (1,197 trophies), blackbuck (*Antilope cervicapra*) (1,196 trophies) and brown bear (*Ursus arctos*) (1,195 trophies) (Table 2).

Nearly 5,044 trophies of the four "Africa's Big Five" species that are included in the WCMC-CITES Trade Database were imported into the U.S. over the period: 2,169 African lion trophies (from South Africa, Zimbabwe, Tanzania, Mozambique, Namibia and others with South Africa as the origin of almost every captive-sourced African lion imported into the U.S.) (Table 14 and Appendix Table 1); 1,007 African elephant trophies (from Zimbabwe, Namibia, South Africa, Botswana, Tanzania and Zambia) (Table 15); 1,639 African leopard trophies (from Zimbabwe, Tanzania, Namibia, South Africa, Mozambique and others) (Table 16); and 248 rhinoceros trophies (244 southern white rhinoceros (*Ceratotherium simum simum*) from South Africa and Namibia (Table 18) and four black rhinoceros from Namibia (Table 17).

Table 2. U.S. trophy imports by CITES-listed mammal species

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
American black bear (*Ursus americanus*)	7,159	8,715	8,684	8,545	11,945	9,010	45,048	**62%**
Chacma baboon (*Papio ursinus*)	587	631	647	513	615	599	2,993	**4%**
Hartmann's mountain zebra (*Equus zebra hartmannae*)	546	599	594	502	521	553	2,762	**4%**
Gray wolf (*Canis lupus*)	409	491	420	449	411	436	2,180	**3%**
Lion (*Panthera leo*)	741	790	483	95	60	434	2,169	**3%**
Red lechwe (*Kobus leche*)	271	313	343	318	444	338	1,689	**2%**
Leopard (*Panthera pardus*)	334	402	338	272	294	328	1,640	**2%**
Vervet monkey (*Chlorocebus pygerythrus*)	172	194	222	198	411	240	1,197	**2%**
Blackbuck (*Antilope cervicapra*)	148	243	282	271	252	240	1,196	**2%**
Brown bear (*Ursus arctos*)	205	230	238	272	250	239	1,195	**2%**
Hippopotamus (*Hippopotamus amphibius*)	194	192	220	214	242	213	1,062	**1%**
African elephant (*Loxodonta africana*)	473	186	151	136	61	202	1,007	**1%**
Caracal (*Caracal caracal*)	197	243	209	167	170	198	986	**1%**
Bighorn sheep (*Ovis canadensis*)	109	155	139	160	175	148	738	**1%**
Mountain lion (*Puma concolor*)	145	129	132	157	146	142	709	**1%**
Siberian ibex (*Capra sibirica*)	88	136	153	120	168	133	665	**1%**
Canada lynx (*Lynx canadensis*)	93	102	110	91	164	112	560	**1%**
Blue duiker (*Philantomba monticola*)	63	89	65	135	88	88	440	**1%**
African civet (*Civettictis civetta*)	78	89	89	73	91	84	420	**1%**
Yellow baboon (*Papio cynocephalus*)	92	90	58	83	63	78	386	**1%**
Southern white rhinoceros (*Ceratotherium simum simum*)	34	77	36	47	50	49	244	**<1%**
Black rhinoceros (*Diceros bicornis*)	0	3	0	0	1	1	4	**<1%**
Other (70 species)	545	694	713	687	688	666	3,327	**5%**
Grand Total	**12,683**	**14,793**	**14,326**	**13,505**	**17,310**	**-**	**72,617**	**-**

Table based on importer reported quantities. Species that represent less than 1% of grand total are collapsed into "Other", except for select species of interest.

Number of trophies imported into the United States by country of origin

Canada was by far the top country of origin of trophies imported into the U.S., comprising 68% of imports (Table 3). A total of 49,154 trophies, or 9,831 per year on average, were imported into the U.S. from Canada during the period (Table 3). Over the five-year period, the U.S. imported 44,991 American black bear trophies that originated in Canada, for an average of almost 9,000 American black bear trophies imported per year (Table 19). In addition, 2,126 gray wolf trophies, 682 brown bear trophies, 652 mountain lion (*Puma concolor*) trophies and 558 Canada lynx (*Lynx canadensis*) trophies that originated in Canada were imported into the U.S. (Appendix Table 2).

South Africa, Namibia, Zimbabwe, Argentina, Tanzania, Mexico, Zambia, Russia and Tajikistan rounded out the top 10 countries from which the U.S. imported trophies during the period (Table 3).

Table 3. U.S. trophy imports by country of origin

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Canada	7,966	9,592	9,483	9,351	12,762	9,831	49,154	**68%**
South Africa	1,944	2,369	2,113	1,577	1,945	1,990	9,948	**14%**
Namibia	711	812	901	711	724	772	3,859	**5%**
Zimbabwe	751	589	407	304	337	478	2,388	**3%**
Argentina	152	237	270	286	246	239	1,191	**2%**
Tanzania	282	246	177	162	88	191	955	**1%**
Mexico	124	179	176	237	235	191	951	**1%**
Zambia	41	39	70	116	227	99	493	**1%**
Russia	36	58	93	130	174	99	491	**1%**
Tajikistan	59	105	89	110	117	96	480	**1%**
Kyrgyzstan	71	91	92	67	80	81	401	**1%**
Mozambique	92	104	67	72	66	81	401	**1%**
Other (47 countries)	454	372	388	382	309	381	1,905	**3%**
Grand Total	**12,683**	**14,793**	**14,326**	**13,505**	**17,310**	**-**	**72,617**	**-**

Table based on importer reported quantities. Countries that represent less than 1% of grand total are collapsed into "Other."

Source of trophies imported into the United States

Most (96%) of the trophies imported into the U.S. were wild-sourced, while 3% were captive-sourced (2% were bred in captivity, 1% were born in captivity and <1% were ranched*) (Table 4). The top five wild-sourced species imported as trophies over the period were the American black bear (44,615 trophies), chacma baboon (2,972 trophies), Hartmann's mountain zebra (2,736 trophies), gray wolf (2,120 trophies) and leopard (1,618 trophies) (Appendix Table 3). The majority of trophies imported from captive-sourced species were from African lions, making up 56% of the total U.S. imports of captive-sourced trophies (Appendix Table 4), and originated in South Africa (Appendix Table 1). The rest of the top five captive-sourced species imported as trophies were the red lechwe (654 trophies), Barbary sheep (*Ammotragus lervia*) (79 trophies), bighorn sheep (*Ovis canadensis*) (34 trophies) and hog deer (*Axis porcinus*) (28 trophies) (Appendix Table 4).

Table 4. U.S. trophy imports by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Wild	12,010	13,988	13,739	13,216	16,785	13,948	69,738	**96%**
Bred in captivity	382	475	305	62	30	251	1,254	**2%**
Born in captivity	141	157	182	151	118	150	749	**1%**
Seized	126	153	91	67	67	101	504	**1%**
Unknown	2	3	1	0	294	60	300	**<1%**
Ranched	20	17	7	8	8	12	60	**<1%**
Pre-Convention	2	0	1	1	6	2	10	**<1%**
Appendix-I animals bred in captivity for commercial purposes	0	0	0	0	1	1	1	**<1%**
Marine environment not under jurisdiction of any state	0	0	0	0	1	1	1	**<1%**
Grand Total	**12,683**	**14,793**	**14,326**	**13,505**	**17,310**	**-**	**72,617**	**-**

Table based on importer reported quantities. Corresponding source codes: Wild ("W"), Bred in captivity ("C"), Born in captivity ("F"), Seized ("I"), Unknown ("U"), Pre-convention ("O"),. Appendix-I animals bred in captivity for commercial purposes ("D"), Marine environment not under jurisdiction of any State ("X").

*CITES source code definitions (pg. 4: *cites.org/sites/default/files/eng/prog/captive_breeding/E-Souce%20codes%20booklet%20-%20April%2017.pdf*

Table 5. U.S. imports of captive-sourced trophies by country of origin

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
South Africa	915	1,091	929	442	171	710	3,548	**84%**
Mexico	3	40	109	167	166	97	485	**12%**
Zambia	6	3	46	14	14	17	83	**2%**
Argentina	0	4	7	24	0	7	35	**1%**
Spain	10	8	9	6	2	7	35	**1%**
Canada	16	1	0	0	0	4	17	**<1%**
Australia	0	0	0	1	0	1	1	**<1%**
Croatia	0	0	0	1	0	1	1	**<1%**
Tanzania	0	0	0	0	1	1	1	**<1%**
United States	0	1	0	0	0	1	1	**<1%**
Zimbabwe	0	0	0	1	0	1	1	**<1%**
Grand Total	**950**	**1,148**	**1,100**	**656**	**354**	**-**	**4,208**	**-**

Table based on importer reported quantities. Source filtered for bred in captivity ("C"), born in captivity ("F") or ranched ("R").

84% of the **4,208 captive-sourced CITES-listed** mammal trophies imported into the U.S. **originated in South Africa.**

Global trophy exports

Globally, 80,321 trophies from CITES-listed mammal species were exported from 2014 to 2018 (Table 6). The top global exporters of hunting trophies from CITES-listed mammals were Canada (31%), South Africa (26%), Namibia (16%) and Zimbabwe (11%) (Table 6). The U.S. was one of the world's top 10 exporters of CITES-listed mammal trophies between 2014 and 2018, with 1,169 exports, which is on average 234 trophies each year during this period (Table 6). Canada and South Africa were by far the largest exporting countries in the world, accounting for 31% and 26%, respectively, of global trophy exports of CITES-listed mammals (Table 6). Namibia, Zimbabwe, Mexico, Argentina, Tanzania, Kryrgyzstan, Zambia and the U.S. rounded out the rest of the global top 10 trophy exporters (Table 6).

Notably, the number of global exports as reported by importers was 96,895 (Appendix Table 5). While exporter and importer quantities often differ, there was a noticable difference in the number of exports as reported by Canada, which was the top exporter by both metrics. Canada reported exporting 24,605 trophies of CITES-listed mammals (31% of global exports), while global importers reported 52,059 exports from Canada (which would account for 54% of global exports) (Table 6, Appendix Table 5). As Canada has completed reports for those years, there are clearly some major discrepancies in the data that should be noted and will be discussed later in this report.

Table 6. Global exporters of trophies

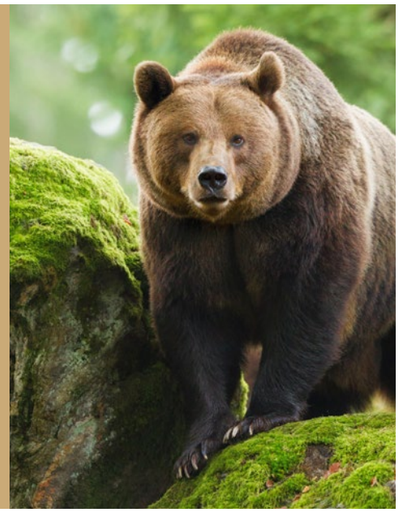
Exporting country	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Canada	4,536	4,718	4,882	4,924	5,545	4,921	24,605	**31%**
South Africa	5,049	5,197	4,686	4,093	1,991	4,204	21,016	**26%**
Namibia	2,454	2,547	2,859	2,563	2,482	2,581	12,905	**16%**
Zimbabwe	2,013	2,093	1,448	1,472	1,488	1,703	8,514	**11%**
Mexico	180	276	291	394	422	313	1,563	**2%**
Argentina	0	526	432	506	0	293	1,464	**2%**
Tanzania	415	380	207	164	236	281	1,402	**2%**
Kyrgyzstan	93	0	377	466	331	254	1,267	**2%**
Zambia	132	72	521	265	184	235	1,174	**1%**
United States	277	287	137	204	264	234	1,169	**1%**
Russia	357	298	0	0	500	231	1,155	**1%**
Mozambique	204	130	167	176	166	169	843	**1%**
Other (53 countries)	887	584	640	569	564	649	3,244	**4%**
Grand Total	**16,597**	**17,108**	**16,647**	**15,796**	**14,173**	**-**	**80,321**	**-**

Table based on exporter reported quantities. Countries that represent less than 1% of grand total are collapsed into "Other."

United States trophy exports

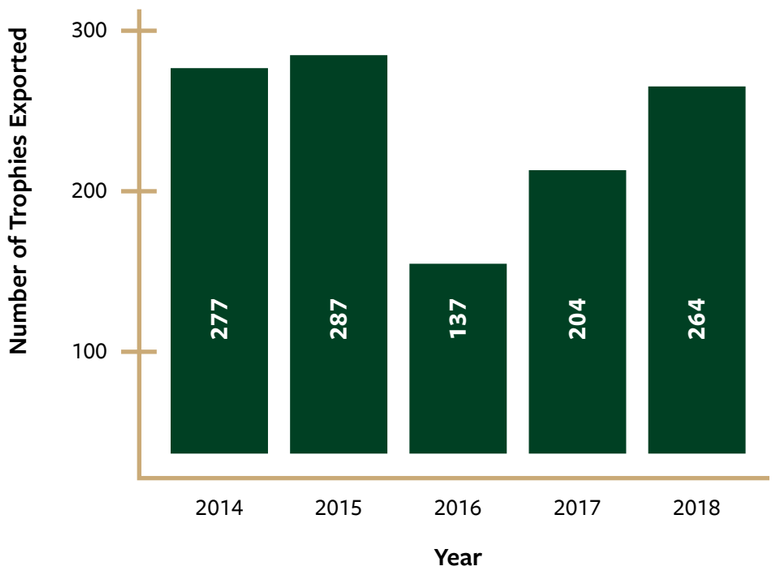
- 1,169 CITES-listed wild mammal trophies exported to 51 countries
- 48 of which are listed as Threatened or Endangered under the ESA
- American black bear trophies: 336
- Brown bear trophies: 272
- Mountain lion trophies: 117
- Barbary sheep trophies: 87
- Blackbuck trophies: 69

Given that the U.S. was the major consumer of imported trophies, that other sources demonstrate hunting is a major activity on U.S. soil, and that U.S. exports were relatively low, it is likely that the U.S. is also the largest consumer of hunting trophies of mammals that originate in the U.S.



Between 2014 and 2018, the U.S. exported 1,169 hunting trophies from CITES-listed mammals (Table 6, Figure 3). Of trophies exported from the U.S., 790 trophies originated in the U.S. (68%) and 379 originated elsewhere but were imported and then exported through the U.S. (Appendix Table 6). The remaining trophies exported by the U.S. originated in Canada, along with some from South Africa, Mexico and several other countries (Appendix Table 6).

Figure 3: Exports of trophies of CITES-listed mammals from the U.S. by year



United States trophy exports

Number of trophies exported by species

Over the period examined, the U.S. exported trophies from 57 different CITES-listed mammal species (Appendix Table 7) to 51 countries (Table 8). Of the trophies that originated in the U.S., exports included 561 trophies of nine species native to the U.S., including some of America's most iconic native species: 170 American black bears, 253 brown bears, 71 mountain lions, 31 gray wolves and 21 bobcats (*Lynx rufus*) (Table 7). In addition, the U.S. exported 48 trophies of species with U.S. origin that are listed as Threatened or Endangered under the ESA (Table 13). One hundred and twenty-two of the trophies exported were of species considered threatened by the IUCN Red List: 95 Vulnerable, three Endangered and 24 Critically Endangered (Table 11). In addition, there were 20 trophies exported with U.S. origin from the scimitar oryx (*Oryx dammah*), which is Extinct in the Wild according to the IUCN Red List, and all specimens were either born or bred in captivity (Appendix Table 8).

Table 7. U.S. trophy exports with U.S. origin by species

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Brown bear (*Ursus arctos*)	70	76	32	31	44	51	253	**32%**
American black bear (*Ursus americanus*)	52	47	22	35	14	34	170	**22%**
*Barbary sheep (*Ammotragus lervia*)	15	12	8	12	35	17	82	**10%**
Mountain lion (*Puma concolor*)	20	20	5	10	16	15	71	**9%**
*Blackbuck (*Antilope cervicapra*)	16	18	11	10	7	13	62	**8%**
Gray wolf (*Canis lupus*)	10	9	4	4	4	7	31	**4%**
*Addax (*Addax nasomaculatus*)	8	0	7	4	2	5	21	**3%**
Bobcat (*Lynx rufus*)	5	3	0	4	9	5	21	**3%**
*Scimitar oryx (*Oryx dammah*)	6	2	7	4	1	4	20	**3%**
*Nilgai (*Boselaphus tragocamelus*)	0	3	2	2	1	2	8	**1%**
*Markhor (*Capra falconeri*)	4	0	1	2	1	2	8	**1%**
Canada lynx (*Lynx canadensis*)	1	1	0	2	1	1	5	**1%**
Walrus (*Odobenus rosmarus*)	0	0	0	0	5	1	5	**1%**
*Arabian oryx (*Oryx leucoryx*)	2	0	3	0	0	1	5	**1%**

Table 7. U.S. trophy exports with U.S. origin by species, continued

Species	2014	2015	2016	2017	2018	Average per Year	Grand Total	Percent of Grand Total
North American river otter (*Lontra canadensis*)	1	1	0	0	2	1	4	**1%**
*Transcaspian urial (*Ovis cycloceros arkal*)	1	0	0	2	1	1	4	**1%**
*Dama gazelle (*Nanger dama*)	0	0	2	1	0	1	3	**<1%**
*Barasingha (*Rucervus duvaucelii*)	0	1	2	0	0	1	3	**<1%**
*Hog deer (*Axis porcinus*)	0	1	1	0	0	1	2	**<1%**
*Wild goat (*Capra hircus aegagrus*)	0	0	0	0	2	1	2	**<1%**
*Domestic Sheep (*Ovis aries*)	1	1	0	0	0	1	2	**<1%**
*Mouflon (*Ovis gmelini*)	1	0	0	0	1	1	2	**<1%**
*Blue Sheep (*Pseudois nayaur*)	0	0	0	1	1	1	2	**<1%**
Northern Rocky Mountain wolf (*Canis lupus irremotus*)	0	0	0	1	0	1	1	**<1%**
*Siberian ibex (*Capra sibirica*)	0	0	0	0	1	1	1	**<1%**
*White-nosed Coati (*Nasua narica*)	1	0	0	0	0	1	1	**<1%**
*Eld's deer (*Rucervus eldii*)	0	0	1	0	0	1	1	**<1%**
Grand Total	**214**	**195**	**108**	**125**	**148**	**-**	**790**	**-**

Table based on exporter reported quantities. Asterisk (*) indicates species not native to the U.S.

Many of the non-native species with U.S. origin that were **exported from the U.S ...** were introduced to the U.S. for the **purpose of trophy hunting** and are commonly bred and hunted at fenced ranches...known as "canned hunting".

Number of U.S. trophy exports imported by other countries

Between 2014 and 2018, the U.S. exported 1,169 trophies to 51 countries (Table 8). Canada imported the most trophies from the U.S. (497 trophies), while Mexico (118 trophies), Australia (80 trophies), Germany (59 trophies) and Norway (41 trophies) rounded out the top five (Table 8).

Table 8. U.S. trophy exports by importing country

Importer	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Canada	104	107	53	64	169	100	497	**43%**
Mexico	20	30	22	32	14	24	118	**10%**
Australia	22	20	5	13	20	16	80	**7%**
Germany	22	24	6	5	2	12	59	**5%**
Norway	19	7	2	10	3	9	41	**4%**
Denmark	13	13	1	6	5	8	38	**3%**
New Zealand	2	11	5	6	5	6	29	**2%**
Spain	6	2	6	5	8	6	27	**2%**
Argentina	7	3	5	7	4	6	26	**2%**
South Africa	6	3	7	0	6	5	22	**2%**
Other (41 countries)	56	67	25	56	28	55	287	**24%**
Grand Total	**277**	**287**	**137**	**204**	**264**	**-**	**1,169**	**-**

Table based on exporter reported quantities. Countries that represent less than 1% of grand total are collapsed into "Other."

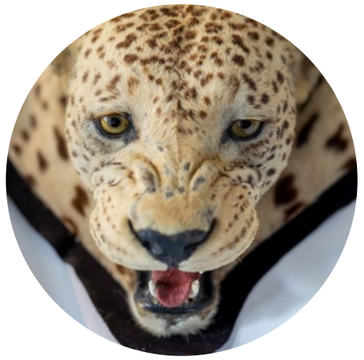
Source of trophies exported from the United States

Of the 790 trophies exported that also originated in the U.S., 76% were wild-sourced, 16% were from animals born in captivity, 5% were bred in captivity, 2% were seized and 1% were ranched (Table 9).

Table 9. U.S. trophy exports with U.S. origin by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Wild	160	160	64	90	127	121	601	**76%**
Born in captivity	42	13	28	27	14	25	124	**16%**
Bred in captivity	8	12	11	7	4	9	42	**5%**
Seized	4	8	3	1	2	4	18	**2%**
Ranched	0	2	2	0	1	1	5	**1%**
Grand Total	**214**	**195**	**108**	**125**	**148**	**-**	**790**	**-**

Table based on exporter reported quantities. Filtered for trophies with the U.S. as exporter and origin. Corresponding source codes: Wild ("W"), Born in captivity ("F"), Bred in captivity ("C"), Seized ("I"), Ranched ("R").



Trophies of species listed on the IUCN Red List

The IUCN Red List is a comprehensive source of the global extinction risk status of species and provides information about range, population size, habitat and ecology, use and/or trade and threats in order to help inform conservation decisions[37]. Species are listed under nine categories that indicate their risk of extinction based on the species distribution and/or population status: Data Deficient, Least Concern, Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild and Extinct. Species listed as Vulnerable, Endangered and Critically Endangered are considered threatened by the IUCN Red List. These assessments are based on extinction probability analyses that account for geographic range, population size and population trends[38].

A total of 9,263 trophies from 17 species listed as Vulnerable (8,106 trophies, 87% of total), Endangered (1,153 trophies, 12% of total), or Critically Endangered (4 black rhinoceros trophies, less than 1%) by the IUCN Red List were imported into the U.S. (Table 10). Of the 1,153 trophies from six species listed as Endangered, 1,007 (87% of total) were African elephant trophies (Table 10). In addition, 14 trophies from the scimitar oryx, which is listed as Extinct in the Wild, were imported into the U.S. (Table 12). Eleven were listed as wild sourced, two as seized and one as captive bred (Appendix Table 9).

Table 10. U.S. trophy imports of species listed as threatened by the IUCN Red List

Species	IUCN category	2014	2015	2016	2017	2018	Grand Total	Percent of Grand Total
Hartmann's mountain zebra (*Equus zebra hartmannae*)	Vulnerable	546	599	594	502	521	2,762	**30%**
Lion (*Panthera leo*)	Vulnerable	741	790	483	95	60	2,169	**23%**
Leopard (*Panthera pardus*)	Vulnerable	334	402	338	272	294	1,640	**18%**
Hippopotamus (*Hippopotamus amphibius*)	Vulnerable	194	192	220	214	242	1,062	**11%**
African elephant (*Loxodonta africana*)	Endangered	473	186	151	136	61	1,007	**11%**
Bontebok (*Damaliscus pygargus pygargus*)	Vulnerable	61	100	66	44	19	290	**3%**
Barbary sheep (*Ammotragus lervia*)	Vulnerable	26	26	25	32	33	142	**2%**
Hog deer (*Axis porcinus*)	Endangered	7	28	23	16	18	92	**1%**
West Caucasian tur (*Capra caucasica*)	Endangered	0	0	0	20	31	51	**1%**
Zebra duiker (*Cephalophus zebra*)	Vulnerable	7	0	14	18	0	39	**<1%**
Black rhinoceros (*Diceros bicornis*)	Critically Endangered	0	3	0	0	1	4	**<1%**
Sonoran pronghorn (*Antilocapra americana sonoriensis*)	Endangered	0	0	0	0	1	1	**<1%**
Wild water buffalo (*Bubalus arnee*)	Endangered	1	0	0	0	0	1	**<1%**
Giant pangolin (*Manis gigantea*)	Endangered	1	0	0	0	0	1	**<1%**
Siberian musk deer (*Moschus moschiferus*)	Vulnerable	1	0	0	0	0	1	**<1%**
Walrus (*Odobenus rosmarus*)	Vulnerable	0	1	0	0	0	1	**<1%**
Grand Total		**2,392**	**2,327**	**1,914**	**1,349**	**1,281**	**9,263**	**-**

Table based on importer reported quantities. Filtered for IUCN Red List categories: Critically Endangered, Endangered, and Vulnerable. IUCN Red List categories reflect the current listing as of June 4, 2022.

A total of 122 trophies from eight species listed as Vulnerable (95 trophies, 77% of total), Endangered (3 trophies, 2% of total) and Critically Endangered (24 trophies, 19% of total) by the IUCN Red List were exported from the U.S. with U.S. origin (Table 11). Of the 122 trophies exported with U.S. origin, 67% (or 82 trophies) were Barbary sheep trophies with the following sources: 49 were wild-sourced, 29 were born in captivity, two were bred in captivity, one was ranched and one was seized (Table 11, Appendix Table 10). The two Critically Endangered species exported as trophies were the addax (*Addax nasomaculatus*) and dama gazelle (*Nanger dama*), which are non-native to the U.S. and were born in captivity (Table 11, Appendix Table 11; Appendix Table 12).

Table 11. U.S. trophy exports of species with U.S. origin listed as threatened on the IUCN Red List

Species	IUCN category	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Barbary sheep (*Ammotragus lervia*)	Vulnerable	15	12	8	12	35	17	82	**67%**
Addax (*Addax nasomaculatus*)	Critically Endangered	8	0	7	4	2	5	21	**17%**
Walrus (*Odobenus rosmarus*)	Vulnerable	0	0	0	0	5	1	5	**4%**
Arabian oryx (*Oryx leucoryx*)	Vulnerable	2	0	3	0	0	1	5	**4%**
Dama gazelle (*Nanger dama*)	Critically Endangered	0	0	2	1	0	1	3	**2%**
Barasingha (*Rucervus duvaucelii*)	Vulnerable	0	1	2	0	0	1	3	**2%**
Hog deer (*Axis porcinus*)	Endangered	0	1	1	0	0	1	2	**2%**
Eld's deer (*Rucervus eldii*)	Endangered	0	0	1	0	0	1	1	**1%**
Grand Total		**25**	**14**	**24**	**17**	**42**	**-**	**122**	**-**

Table based on exporter reported quantities. Filtered for trophies with the U.S. as exporter and origin. Filtered for IUCN Red List categories: Critically Endangered, Endangered, and Vulnerable. IUCN Red List categories reflect the current listing as of June 4, 2022. For species categorized as Critically Endangered and Endangered, all were born or bred in captivity. For Vulnerable species: Barbary sheep were wild-sourced (49), born in captivity (29), bred in captivity (2), ranched (1), seized (1); all walrus were wild-sourced; all Arabian oryx were born in captivity; all barasingha were born in captivity.

Trophy hunting is a form of unnatural selection that usually targets rare and charismatic species ... that have physical characteristics that are visually impressive, or species that are considered dangerous to hunt.

Trophies of species listed under the Endangered Species Act

The U.S. Fish and Wildlife Service classifies certain species as Threatened or Endangered under the guidance and authority of the ESA after undertaking a review process that includes scientific reviews of the extinction risk status of proposed animals[39]. Via a permitting process, the U.S. allows for the import, breeding and trophy hunting of species listed as Threatened or Endangered under the ESA. Between 2014 and 2018, the U.S. imported 10,484 trophies from species that are listed as Threatened or Endangered under the ESA (Table 12). The top five Endangered or Threatened species imported as trophies over this period were the Hartmann's mountain zebra (2,762 trophies), lion (2,169 trophies), red lechwe (1,689 trophies), leopard (1,640 trophies) and African elephant (1,007 trophies) (Table 12). Over the period studied, the U.S. exported 48 trophies of six different species listed under the ESA that originated in the U.S., including 20 Scimitar oryx, 19 addax and six Arabian oryx (*Oryx leucoryx*) (Table 13).

Table 12. U.S. trophy imports of species listed under the ESA

Species	ESA listing	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Hartmann's mountain zebra (*Equus zebra hartmannae*)	Threatened	546	599	594	502	521	553	2,762	**26%**
Lion (*Panthera leo*)	Endangered/ Threatened	741	790	483	95	60	434	2,169	**21%**
Red lechwe (*Kobus leche*)	Threatened	271	313	343	318	444	338	1,689	**16%**
Leopard (*Panthera pardus*)	Endangered/ Threatened	334	402	338	272	294	328	1,640	**16%**
African elephant (*Loxodonta africana*)	Threatened	473	186	151	136	61	202	1,007	**10%**
Canada lynx (*Lynx canadensis*)	Threatened	93	102	110	91	164	112	560	**5%**
Argali sheep (*Ovis ammon*)	Endangered/ Threatened	62	102	76	88	25	71	353	**3%**
Southern white rhinoceros (*Ceratotherium simum simum*)	Threatened[a]	34	77	36	47	50	49	244	**2%**
Wood Bison (*Bison bison athabascae*)	Threatened	7	6	14	0	0	6	27	**<1%**
Scimitar oryx (*Oryx dammah*)	Endangered	0	2	0	3	9	3	14	**<1%**
Gelada baboon (*Theropithecus gelada*)	Threatened	1	1	2	3	1	2	8	**<1%**
Black rhinoceros (*Diceros bicornis*)	Endangered	0	3	0	0	1	1	4	**<1%**
Kabul markhor (*Capra falconeri megaceros*)	Threatened	0	0	0	3	0	1	3	**<1%**
Cape mountain zebra (*Equus zebra zebra*)	Endangered	0	0	0	1	1	1	2	**<1%**
Sonoran pronghorn (*Antilocapra americana sonoriensis*)	Endangered	0	0	0	0	1	1	1	**<1%**
Siberian musk deer (*Moschus moschiferus*)	Endangered	1	0	0	0	0	1	1	**<1%**
Grand Total	**-**	**2,563**	**2,583**	**2,147**	**1,559**	**1,632**		**10,484**	**-**

Table based on importer reported quantities. [a]Southern white rhinoceros listed a threatened due to similarity of appearance.

Table 13. U.S. trophy exports of species with U.S. origin listed under the Endangered Species Act

Species	ESA listing	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Scimitar oryx (*Oryx dammah*)	Endangered	5	4	5	5	1	4	20	**42%**
Addax (*Addax nasomaculatus*)	Endangered	4	8	5	2	0	4	19	**40%**
Arabian oryx (*Oryx leucoryx*)	Endangered	2	0	2	1	1	2	6	**13%**
Red lechwe (*Kobus leche*)	Threatened	0	0	0	0	1	1	1	**2%**
African elephant (*Loxodonta africana*)	Threatened	0	0	1	0	0	1	1	**2%**
Canada lynx (*Lynx canadensis*)	Threatened	1	0	0	0	0	1	1	**2%**
Grand Total		**12**	**12**	**13**	**8**	**3**		**48**	

Table based on exporter reported quantities. Filtered for trophies with the U.S. as exporter and origin.

United States trophy trade in select species of interest

The following species were chosen for closer analysis because they are either highly coveted by trophy hunters, are at risk of extinction, or both. These species have also recently been the subject of policy discussions in the U.S., and further analysis of their trade data can inform decision-making on management regimes and international trade (see Discussion below).

The lion, African elephant, leopard, and black and white rhinoceros are four of "Africa's Big Five," a term originally coined by big game hunters referring to the five most difficult and dangerous animals in Africa to hunt on foot (the lion, leopard, rhinoceros, elephant and the African buffalo (*Syncerus caffer*)), though the term is now used more generally by wildlife viewing tourism operators and others to refer to these African species because they are iconic. The African buffalo is not listed by CITES and therefore could not be included in this report.

These animals are heavily advertised by hunting outfitters and industry organizaitons for hunts and are featured in many competition and award categories. For example, Safari Club International's record book includes them under five different award competitions[25].

Four of the species highlighted here are categorized as threatened with extinction according to the IUCN Red List (Table 10) and all are listed as Threatened or Endangered under the ESA (Table 12).

We also examined additional trade data for the American black bear because the volume of trophy imports were alarmingly high—they constituted 49% of global trophy imports (Appendix Table 13) and more than every other species imported to the U.S. as hunting trophies combined (Table 2).

Lion

Between 2014 and 2018, the U.S. imported 2,169 lion trophies, or more than 433 trophies on average per year (Table 14). All lion trophies imported into the U.S. during this period originated in Africa. The vast majority (86%) originated in South Africa, followed by Zimbabwe (6%), Tanzania (5%), Mozambique (1%), Namibia (1%) and Zambia (1%) (Table 14). Of the 2,169 lion trophies imported, 1,165 (54%) were from lions bred in captivity with almost 100% of those originating in South Africa (Appendix Tables 13 and 1).

Lion trophy imports decreased significantly between 2014 (741 trophies) and 2018 (60 trophies) due in part to concerted education and advocacy campaigns to end trophy hunting, including from the Humane Society of the United States, Humane Society International and Humane Society Legislative Fund.

Table 14. Lion trophies imported into the U.S. by country of origin

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
South Africa	638	680	437	76	29	372	1,860	86%
Zimbabwe	46	46	22	4	16	27	134	6%
Tanzania	40	43	14	12	0	22	109	5%
Mozambique	10	6	3	3	0	5	22	1%
Namibia	3	10	5	0	0	4	18	1%
Zambia	0	0	2	0	15	4	17	1%
Burkina Faso	2	4	0	0	0	2	6	<1%
Benin	1	0	0	0	0	1	1	<1%
Cameroon	1	0	0	0	0	1	1	<1%
Ethiopia	0	1	0	0	0	1	1	<1%
Grand Total	**741**	**790**	**483**	**95**	**60**	**433**	**2,169**	**-**

Table based on importer reported quantities. Taxon filtered for *Panthera leo*.

African elephant

Between 2014 and 2018, the U.S. imported 1,007 African elephant trophies, or more than 201 on average per year (Table 15). Zimbabwe was the primary country of origin of elephant trophy imports, accounting for 31% of the total imports to the U.S. (Table 15). Namibia (23%), South Africa (23%), Botswana (22%), Tanzania (1%) and Zambia (less than 1%) accounted for the rest (Table 15).

Elephant trophy imports decreased significantly between 2014 (473 trophies) and 2018 (61 trophies) due in part to concerted education and advocacy campaigns to end trophy hunting, including from the Humane Society of the United States, Humane Society International and Humane Society Legislative Fund.

Table 15. African elephant trophies imported into the U.S.

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Zimbabwe	240	52	7	14	4	64	317	31%
Namibia	21	44	74	58	32	46	229	23%
South Africa	21	58	64	61	23	46	227	23%
Botswana	183	31	6	2	0	45	222	22%
Tanzania	8	0	0	1	0	2	9	1%
Zambia	0	1	0	0	2	1	3	<1%
Grand Total	**473**	**186**	**151**	**136**	**61**	**201**	**1,007**	**-**

Table based on importer reported quantities. Taxon filtered for *Loxodonta africana*.

Leopard

The U.S. imported 1,640 leopard trophies, or 328 trophies on average per year over the period studied (Table 16). All leopard trophies imported into the U.S. originated in Africa, except one that originated in India (Table 16). Zimbabwe was the primary origin of leopard trophy imports, accounting for 34% of the total imports to the U.S. (Table 16). Tanzania (23%), Namibia (19%), South Africa (10%) and Mozambique (8%) accounted for the rest of the top five (Table 16).

Table 16. Leopard trophies imported into the U.S. by country of origin

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Zimbabwe	131	149	110	89	82	113	561	**34%**
Tanzania	100	102	69	70	43	77	384	**23%**
Namibia	39	57	71	63	80	62	310	**19%**
South Africa	36	61	52	5	13	34	167	**10%**
Mozambique	27	31	25	20	23	26	126	**8%**
Zambia	1	2	9	25	53	18	90	**5%**
India	0	0	1	0	0	1	1	**<1%**
Nigeria	0	0	1	0	0	1	1	**<1%**
Grand Total	**334**	**402**	**338**	**272**	**294**	**328**	**1,640**	**-**

Table based on importer reported quantities. Taxon filtered for *Panthera pardus*.

Black rhinoceros

The U.S. imported four black rhinoceros trophies for an average of one trophy per year over the period studied (Table 17). All black rhinoceros trophies imported into the U.S. originated in Namibia (Table 17).

Table 17. Black rhinoceros trophies imported into the U.S.

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Namibia	0	3	0	0	1	1	4	**100%**
Grand Total	**0**	**3**	**0**	**0**	**1**	**-**	**4**	**-**

Table based on importer reported quantities. Taxon filtered for *Diceros bicornis*.

Southern white rhinoceros

The U.S. imported 244 Southern white rhinoceros trophies, or 49 trophies on average per year over the period studied (Table 18). Most (96%) originated in South Africa and 4% originated in Namibia (Tables 18).

Table 18. Southern white rhinoceros trophies imported into the U.S.

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
South Africa	34	76	34	45	46	47	235	**96%**
Namibia	0	1	2	2	4	2	9	**4%**
Grand Total	**34**	**77**	**36**	**47**	**50**	**-**	**244**	**-**

Table based on importer reported quantities. Taxon filtered for *Ceratotherium simum simum* and *Ceratotherium simum*.

American black bear

The U.S. imported 45,048 American black bear trophies between 2014 and 2018, or more than 9,009 on average per year (Table 19). Nearly all trophies were imported from Canada (44,991 trophies) with the remaining trophies having originated in the U.S. and then re-imported (Table 19).

There was a large discrepancy in the number of American black bears trophies reported as exported by Canada and imported by the U.S. While the U.S. reported importing 44,888 American black bear trophies from Canada (Table 19), Canada only reported exporting 11,937 American black bear trophies to the U.S., for a total difference of 32,951 American black bear trophies over the four years (Appendix Table 15).

During this same period, the U.S. exported 336 American black bear trophies, half of which originated in the U.S. (51%), while the other half (49%) originated in Canada and were then re-exported (Table 20). American black bear trophies that originated in the U.S. were exported to Canada (25%), Germany (12%), Norway (10%), Denmark (8%), Australia (6%) and 25 other countries (Table 21).

Table 19. American black bear trophies imported into the U.S. by country of origin

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Canada	7,148	8,703	8,670	8,530	11,940	8,999	44,991	**100%**
United States*	11	12	14	15	5	12	57	**<1%**
Grand Total	**7,159**	**8,715**	**8,684**	**8,545**	**11,945**	**-**	**45,048**	**-**

Table based on importer reported quantities. Taxon filtered for *Ursus americanus*. Asterisk (*) indicates trophies with U.S. as origin and importer are indicative of imports that were exported from the U.S. and are now being re-imported.

Table 20. American black bear trophies exported from the U.S. by country of origin

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
United States	52	47	22	35	14	34	170	**51%**
Canada	19	21	3	28	95	34	166	**49%**
Grand Total	**71**	**68**	**25**	**63**	**109**	**-**	**336**	**-**

Table based on exporter reported quantities. Taxon filtered for *Ursus americanus*.

Table 21. American black bear trophies exported from the U.S. that originated in the U.S. by importing country

Importing country	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Canada	12	8	11	8	4	9	43	**25%**
Germany	8	6	2	3	1	4	20	**12%**
Norway	10	3	0	4	0	4	17	**10%**
Denmark	6	4	1	1	2	3	14	**8%**
Australia	2	5	0	4	0	3	11	**6%**
New Zealand	0	6	2	2	1	3	11	**6%**
Argentina	0	0	0	5	1	2	6	**4%**
Mexico	1	2	2	1	0	2	6	**4%**
Russia	2	3	0	0	0	1	5	**3%**
Other (21 countries)	11	10	4	7	5	8	37	**22%**
Grand Total	**52**	**47**	**22**	**35**	**14**	**-**	**170**	**-**

Table based on exporter reported quantities. Taxon filtered for *Ursus americanus*. Countries that represent less than 3% of grand total are collapsed into "Other."

Discussion

According to WCMC-CITES trade data, the U.S. has been the world's largest consumer of hunting trophies of CITES-listed mammal species, and therefore has the greatest responsibility for ensuring such activity is not harming wildlife.

Globally, the WCMC-CITES Trade Database reports that nearly 100,000 CITES-listed mammal species were imported as trophies, the majority of which routed to the U.S. However, due to the severe lack of publicly available data, this represents the minimum number of mammals killed as trophies. We are not able to assess the true number of animals hunted for trophies every year in this report. Instead, we were only able to examine a subset of trophy-hunted species: those mammals being imported or exported as trophies as reported in the WCMC-CITES Trade Database. In addition, we used conservative metrics to determine which specimens qualified as trophies so that we did not overestimate the number of animals traded as trophies. And although all types of animals (mammals, birds, reptiles and fish) are killed as trophies, this report focused only on mammals. Therefore, the numbers reported here are gross underestimates of the total number of animals killed by trophy hunters as we only focused on trophies from CITES-listed mammals that were traded internationally.

U.S. trophy imports

Even with these limitations, the data analyzed in this report make it clear that the U.S. was the world's largest importer of trophies of CITES-listed mammal species between 2014 and 2018, importing 72,617 trophies and accounting for 75% of total global imports (Table 1). This demonstrates that Americans have a disproportionate influence over the number of hunting trophies traded globally.

This too, however, is an underestimate of the true scope of the impact of American trophy hunters. To get an idea of what percentage of the total number of U.S. mammal trophy imports we captured with this report, we compared 2014-2018 U.S. import data from this report to the number of all mammal trophy imports reported in the USFWS Law Enforcement Management Information System database, which records U.S. imports of all species regardless of whether they're listed under CITES or not.

We estimate in this report that the U.S. imported 72,617 trophies from CITES-listed mammals. In contrast, we estimated that over 391,000 total mammals (including species not listed under CITES) were imported into the U.S. as trophies between 2014-2018 based on the LEMIS trade data.* Therefore, we estimate that actual imports of mammal trophies into the U.S., regardless of their listing under CITES, were more than five times higher than what we captured in this report. This indicates that the numbers in this report are a a massive underestimate of the country's involvement in the global trophy hunting industry.

By far, the most imported species as a trophy in the world between 2014 and 2018 was the American black bear. The American black bear is listed under CITES Appendix II, meaning that while they are not necessarily threatened with extinction now, they may become so unless trade is closely controlled40. Yet, American black bears accounted for 49% of the global trade in CITES-listed mammal trophies (a total of 47,260 trophies) (Appendix Table 13). The U.S. imported 95% of those trophies, or 45,048 trophies (Table 19). Notably, trade in American black bears increased over the period studied; U.S. imports of black bear trophies exported from Canada increased from 7,155 trophies in 2014 to 11,799 trophies in 2018 (Appendix Table 15).

In examining black bear trade data, however, there were large discrepancies between the number of American black bear trophies reported by each country, where it appears that Canada underreported exports of black bear trophies to the U.S. by nearly 33,000 trophies. While the U.S. reported importing 44,888 American black bear trophies from Canada, Canada only reported exporting 11,937 American black bear trophies to the U.S., for a total difference of 32,951 American black bear trophies over the four years (Appendix Table 15). This discrepancy in reporting is due to a bilateral trade agreement between the U.S. and Canada where Canada does not require CITES export permits for this species. The number of American black bears killed for trophies in Canada and imported into the U.S. is difficult to comprehend at nearly 45,000 over five years (Table 19). This number would appear to be only a fraction of actual trade if one relied only on data from exporter reported quantities due to the bilateral trade agreement.

*We estimated the total number of mammal trophies imported into the US 2014-2018 from the LEMIS trade database as description = BOD, RUG, SKE, SKI, SKU, TRO for purpose H with unit = NO and description = TRO for purpose P with unit = NO. LEMIS wildlife trade data available here: *www.fws.gov/library/collections/office-law-enforcement-importexport-data?$skip=50.*

The most important trade path for American black bear trophies was between the U.S. and Canada, which is evident by the enormous number of trophies imported into the U.S. from Canada. The hunting of American black bears in North America is predominantly controlled by U.S. states and Canadian provinces. In the U.S., 32 states allow the hunting of American black bears, including cubs, with some allowing practices that violate fair chase ethics such as bear baiting and hound hunting (where GPS-collared hounds chase the bears to exhaustion or to trap them in a location for an easier shot).

The U.S. also imported a significant number of hunting trophies from mammal species listed under the ESA and categorized as threatened on the IUCN Red List. Over 9,000 trophies imported into the U.S. were from CITES-listed mammals categorized as Vulnerable (88%), Endangered (12%) and Critically Endangered (<1%), including some of the most iconic species such as the lion, African elephant and leopard (Table 10). Similarly, over 10,000 trophies imported into the U.S. included species listed under the ESA (Table 12). Hartmann's mountain zebra trophies were the most commonly imported species of both threatened designations (Tables 10 and 12).

While only 3% of CITES-listed mammal species imported into the U.S. as trophies were captive-sourced (captive-bred, captive-born or ranched) (Table 4), 54% of African lion trophies imported into the U.S. were captive-sourced (Appendix Table 14) with nearly all imports of captive-sourced lions from South Africa (Appendix Table 1). In fact, 84% of the 4,208 captive-sourced CITES-listed mammal trophies imported into the U.S. originated in South Africa (Table 5). The lion made up the majority of captive-sourced imports (56%) followed by the red lechwe (31%) (Appendix Table 4).

The WCMC-CITES trade database reports that nearly **100,000 CITES-listed mammal species were imported as trophies,** the majority of which **routed to the U.S.** However, due to the severe lack of publicly available data, this represents the minimum number of mammals killed as trophies.

Species spotlight

Rhinoceros, lions, African elephants and leopards are highly coveted and heavily promoted by the trophy hunting industry as members of Africa's Big Five, correlating to the fact that the U.S. imported a significant number of such hunting trophies between 2014 and 2018. Black rhinoceros have the worst conservation status of the four as they are listed as Critically Endangered on the IUCN Red List with only 3,142 mature individuals remaining[41]. The southern white rhinoceros is listed as Vulnerable on the IUCN Red List with decreasing population of approximately 10,000 mature individuals[42]. The primary threat to both rhinoceros species is poaching to supply the illegal rhinoceros horn trade[41,42].

Lions, African elephants and leopards are considered threatened under the IUCN Red List and are categorized as Threatened or Endangered under the ESA and have been the subject of domestic and/or foreign policy discussions at the time of publication of this report.

Lion (Panthera leo)

The lion is listed as Vulnerable on the IUCN Red List[43] and Endangered or Threatened, depending on the population, under the ESA. However, the most recent population assessment is from 2016, and updated population estimates are needed. According to the latest IUCN Red List assessment, there are only about 23,000-39,000 mature lions globally with populations having declined by approximately 43% over the last three lion generations (21 years: 1993-2014)[43]. They are found in only 17% of their historical range[43]. The top threats to lions are indiscriminate killings, loss of prey base and habitat loss[43]. Poorly managed trophy hunting has also contributed to population declines in several countries such as Botswana, Namibia, Tanzania, Zimbabwe, Cameroon and Zambia[43].

Given that trophy hunters seek out trophies that would speak to their hunting prowess and virility, lions are popular targets for trophy hunters as they are large carnivores, have attractive physical characteristics and are one of "Africa's Big Five". Heavily advertised by hunting outfitters, African lion hunts/trophies also bring in significant revenue for the trophy hunting industry: trophy fees for wild lions can cost up towards US$65,000, which excludes airfare, hotel accommodations before and after the hunt, and taxidermy services[44,45].

African lion hunting trophies are predominantly sourced from the wild or captive hunting operations. Captive lion hunts are attractive to trophy hunters because they are often cheaper than hunting a wild lion, trophies from captive lions are thought to have fewer scars and other "impurities" than trophies from wild lions, and trophy hunters are often guaranteed a kill because the lions are usually habituated to humans and are often baited to a particular location within the enclosure. Lions within this industry are kept for a variety of purposes including tourism, cub-petting and interaction[46], which contributes to the lions' habituation towards humans. The lions will ultimately usually end up being killed in captive hunts and/or for the lion bone trade.

Based on one of the most recent studies available, it is estimated that there were between 8,000 and 8,500 captive lions in South Africa in 2016[47]. Between 2014 and 2018, the U.S. was the world's leading importer of lion trophies having imported 2,169 trophies (Table 2) of the 3,770 total lion trophies in trade (Appendix Table 13). South Africa was the primary origin of lion trophies imported to the U.S. and the majority of lion trophies imported were captive-sourced.

In October 2016, the USFWS announced restrictions on certain lion trophy imports. The Director of the USFWS at the time said, "the United States will not allow the import of lion trophies taken from captive lion populations in South Africa"[48]. He explained that for captive lions in South Africa, the "burden of proof has not been met" by South Africa to "provide clear evidence showing a demonstrable conservation benefit to the long-term survival of the species in the wild" [48]. Such proof is required under the ESA for the USFWS to authorize a hunting trophy import permit of an African lion since the species was listed as Threatened and Endangered under the ESA earlier in 2016[126].

It is probable that this decision by the USFWS is the reason for the noticeable reduction in lion trophy imports from South Africa in 2017 and 2018 (76 and 29 trophies, respectively) compared to 2014-2016 (638, 680 and 437 trophies, respectively) (Table 14) since the majority of lion trophy imports from South Africa were captive-sourced (Table 14; Appendix Table 1). It is important to note that despite the USFWS's decision not to import captive-sourced lion trophies from South Africa from October 20, 2016, onward, the U.S. is still reported to have imported 53 lion trophies from captive sources in South Africa between 2017 and 2018, according to the WCMC-CITES Trade Database (Appendix Table 1).

In 2021, the Cabinet of South Africa endorsed a government report calling for the end to lion farming, captive lion hunting, cub-petting and the trade in captive lion parts[49]. The authors determined that "the captive lion breeding industry did not contribute to conservation and was doing damage to South Africa's conservation and tourism reputation"[50].

If the policy recommendations are implemented, the closure of the captive lion breeding industry in South Africa will have a significant impact on the number of captive-sourced lion trophies traded internationally. However, preemptive policy measures by major trophy trade partners are critical in mitigating any potential consequent industry shifts, such as increased hunting and overexploitation of wild lions, hunters and breeders shifting to other target species such as tigers, and American trophy hunters targeting captive-sourced lions in other countries besides South Africa. It is critical that, as the world's leading importer of lion trophies, the U.S. prohibits the import of all hunting trophies of lions, regardless of whether the trophy is from captive or wild sources.

African elephant (Loxodonta africana)

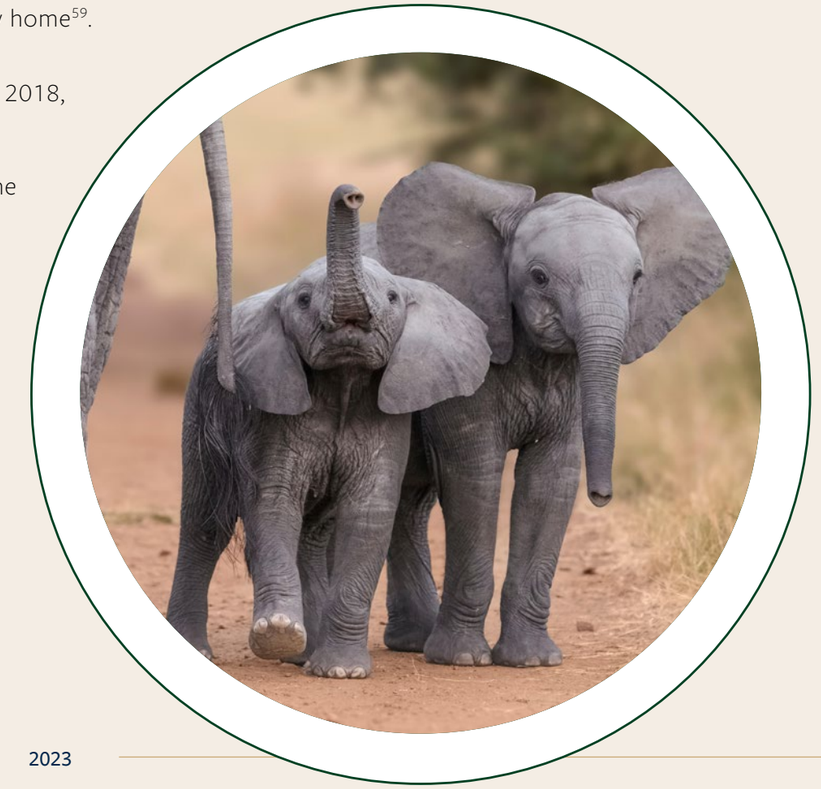
The African elephant (*Loxodonta africana*) is listed under both the IUCN Red List and the ESA. The most recent IUCN Red List assessment published in 2021 split the African elephant into two species: African savanna elephant (*Loxodonta africana*), categorized as Endangered, and African forest elephant (*Loxodonta cyclotis*), categorized as Critically Endangered, both with decreasing population trends[51,52]. Under the ESA, the African elephant (*Loxodonta africana*) is listed as Threatened[53]. Although the WCMC-CITES Trade Database does not distinguish between African savanna elephants and African forest elephants, we understand the trophies in this report to be African savanna elephants (*Loxodonta africana*) based on country of origin and range state distribution.

The latest data from the African Elephant Status Report of 2016 estimates a continental population of both species (*Loxodonta africana* and *Loxodonta cyclotis*) as only 415,428 ± 20,111[54]. This is an alarming decline from estimates of 10 million African elephants in the 1930s[55]. African elephant populations are primarily threatened by habitat loss (savanna elephants have lost 85% of their historic range), habitat fragmentation and poaching[51,52].

Between 2014 and 2018, over 62,290 African elephants were poached[56]. Poaching still occurs at rates that are not biologically sustainable in many parts of the African elephant's range[51,57]. In 2015, the Humane Society of the United States, HSI and other groups petitioned the USFWS to list the African elephant as Endangered due to decreasing population trends and other extinction risk factors.

As a member of Africa's Big Five, the African savanna elephant is highly promoted by trophy hunting outfitters and has a costly trophy fee: the trophy fee alone for elephants with tusks weighing around 40-70 pounds can cost around US $40,000 in South Africa[58]. Because of changing policies in the U.S., some hunting outfitters offer packages where foreigners can kill "non-exportable" elephants, which means hunters can kill the animals and still be eligible for an entry in the Safari Club International record book even if they can't take the trophy home[59].

Nevertheless, between 2014 and 2018, 4,099 African elephant trophies were traded around the world (Appendix Table 13). Of those, the U.S. imported 1,007 trophies, primarily from Zimbabwe (31%), Namibia (23%), South Africa (23%) and Botswana (22%) (Table 15), which accounted for 87% of the total trophies of species listed as Endangered on the IUCN Red List that were imported into the U.S. (calculated from Table 10).



Because poachers and trophy hunters often target elephants with large tusks, we can infer that the biological, social and ecological impacts seen in poaching studies may apply to trophy hunting as well. African elephants are especially susceptible to the negative impacts of targeted removal because they are long-lived, slow to reproduce, and have a complex social structure. For example, social groups may be disrupted by the removal of older males and females who provide multi-generational social and ecological knowledge that is critical to the survival of the entire social group[60,61], and the removal of older male elephants who are important for group cohesion[62] and suppress aggression in younger males[63,64]. Other impacts of selective offtake of African elephants include smaller tusk sizes[65], decreased body size[66], skewed sex ratios, altered age structures and changes in habitat-use[67]. Further, maintaining large, old males in the population is critical for recovery after exploitation[68], such as poaching.

African elephants are vital ecosystem engineers who modify and maintain physical environments, facilitate healthy seed dispersal, increase habitat complexity to the benefit of other animals, and contribute significantly to carbon sequestration[69,70,71,72,73,74,75]. Population declines due to human-induced mortality "including trophy hunting" and social disruptions may have a significant and potentially irreversible impact on elephant populations and the ecosystem.

The proper management of elephant populations, including coordinated management between countries, and the prohibition of trophy hunting are vital to the survival of African elephants. Poor management of trophy hunting as well as a lack of legal and practical capacity to ensure conservation of the species have been documented in at least three countries from which the USFWS authorized African elephant hunting trophy imports between 2014 and 2018 (Zimbabwe: 317 trophies; Tanzania: 9 trophies; and Zambia: 3 trophies) (Table 15). In 2015, the USFWS found that Zimbabwe and Tanzania did not at the time have the legal and practical capacity for the conservation of African elephants sufficient to make a positive enhancement finding on the import of African elephant trophies. For Zimbabwe, the decision was based on a review of Zimbabwe's elephant population management, human-elephant conflict and poaching mitigation efforts, the state of their hunting program, and the lack of current population data/trends in their national management strategy[128, 129, 130]. For Tanzania, the USFWS found questionable management practices, a lack of effective law enforcement, and weak governance which have resulted in uncontrolled poaching and catastrophic elephant population declines in Tanzania[131, 132]. For Zambia, the USFWS previously rejected attempts to import elephant trophies due to similar concerns of mismanagement including inconsistencies in reported elephant population estimates, failure to comply with monitoring requirements, absence of government funding for elephant protection, and lack of effective anti-poaching measures[133,134].

Currently, however, the USFWS allows the import of hunting trophies of African elephants on a case-by-case determination of whether the trophy import requested in the permit application enhances the survival of the species in the wild[76]. Out of concern over the continued population declines of lions and African elephants and doubt as to whether the FWS's case-by-case permit process adequately determines whether a country has proper safeguards in place to protect species vulnerable to poaching, the U.S. Congress directed the USFWS in 2020 to reevaluate its current policy and analyze how targeted investments and technical assistance to the exporting countries' conservation programs would impact the survival of African elephants and lions, improve local communities and sustain species populations[77]. The directive was reiterated in 2021 and 2022 as the USFWS failed to conduct the review[78,79].

Leopard (Panthera pardus)

The most recent IUCN assessment published in 2020 categorizes the leopard as Vulnerable[80], and they are listed as Endangered or Threatened under the ESA, depending on the population. Although there is no reliable estimate on the number of leopards in Africa, scientists believe that leopard populations have declined considerably (similar to lion populations which have decreased by 42% in the last three generations) and occupy only about 25% of their historical range[80].

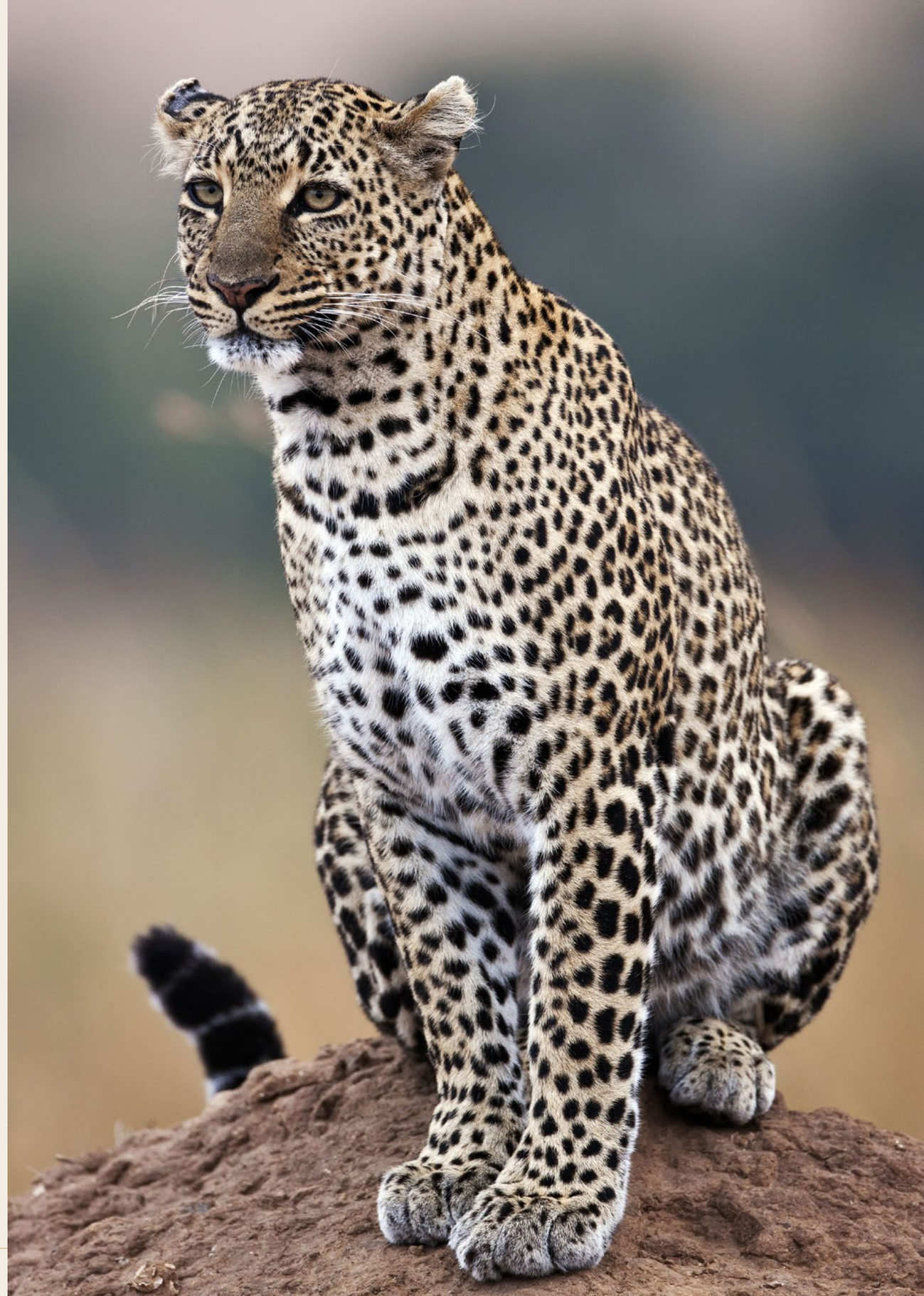
Like the lion and African elephant, leopards are a member of "Africa's Big Five" and highly coveted by trophy hunters. Between 2014 and 2018, 3,267 leopard trophies were traded around the world (Appendix Table 13), of which the U.S. imported 1,640 leopard trophies with all but one from Africa (Table 16). The top five countries of origin for leopard trophies imported to the U.S. were Zimbabwe (561 trophies), Tanzania (384 trophies), Namibia (310 trophies), South Africa (167 trophies) and Mozambique (126 trophies) (Table 16). Leopards, too, often have a high trophy fee; according to Africa Hunt Lodge, the trophy fee to hunt a leopard in South Africa costs US$35,000[81].

For leopards and lions, trophy hunting can have a negative impact on populations not only in hunting areas, but also in adjacent protected areas such as national parks[82]. When trophy hunters remove territory-holding males from populations, new males are drawn into the vacant territories, sometimes from protected areas[83]. This "vacuum effect" can cause declines in neighboring populations and cause population trends to be misinterpreted when hunting areas act as a sink and result in immigration from adjacent areas[84].

Leopards, like lions, are an infanticidal species, meaning when an adult male takes over the territory of another male, the new male will kill the dependent cubs to increase mating opportunities with resident females[85]. In the Sabi Sand Game Reserve in South Africa, infanticide by male leopards accounted for 49% of all cub mortality (where the cause of death was known), indicating that leopards have one of the highest rates of infanticide among mammalian carnivores[85]. During male takeovers, adult females may also be killed while trying to protect their cubs[85]; therefore, maintaining social stability to prevent male takeover is critical for cub survival and reproductive rates. It may take mothers nearly three times longer to replace litters lost to infanticide than litters that survive to independence[86]. In populations with low rates of human disturbance, naturally occurring infanticide does not appear to negatively affect population size[85].

A recent study indicated that trophy hunting negatively affected leopard population density in Zimbabwe[87], which was the No. 1 country of origin for leopard trophies imported into the U.S. (Table 16). The study asserted that "leopard hunting quotas have been shown to be unsustainable in several African countries…with impacts exacerbated by high levels of retaliatory killing of animals in conflict with people…and mismanagement of hunting offtakes"[87]. In 2016 and 2017, South Africa made the determination that poor management of harvest practices and a lack of reliable monitoring of leopard populations warranted a national hunting and export quota of zero leopards in 2016 and 2017, effectively banning trophy hunting of leopards for those years[88].

Leopard populations are decreasing and severely data deficient, which makes it impossible to make sound, science-based management decisions. There are no robust range-wide population estimates and limited reliable data on regional population sizes and demographics. To protect leopard populations from further declines, there must be sufficient data on population size and demographics, as well as long-term monitoring to assess to impacts of all threats; without this information no level of offtake, even if legal, should be considered biologically sustainable.



U.S. trophy exports

Although the U.S. exported only a fraction of the trophies imported, the trophy hunting industry still had a significant impact on both native and non-native species in the U.S. According to WCMC-CITES trade data, the U.S. exported 1,169 trophies of CITES-listed mammal species (Table 6). Of the species exported with U.S. origin, 18 of 27 species and 29% of trophies were non-native (Table 7). As an illustration of just how many more animals might have been killed in the U.S. but which were not exported, we collated U.S. hunting data of three native carnivore species that are popular targets for trophy hunters—American black bears, mountain lions and gray wolves—and found that 46,704 individuals from these species were killed as trophies in the U.S. during 2014-2018.* In addition to the exported trophies from these species, that's another 46,432 animals killed as trophies during the same years from just three native carnivores which were not exported and therefore are not reflected in this report. That's nearly half the total number of global imports from three native carnivores alone that were not recorded in this analysis of trophy trade because those trophies were not exported. Such numbers demonstrate that the U.S. is a major consumer of trophies of both international and domestic species.

The U.S. also exported species that are considered threatened according to the IUCN Red List or the ESA. The most common of such species exported from the CITES and ESA lists were the Barbary sheep, listed as Vulnerable by the IUCN Red List, and the ESA-listed scimitar oryx, which was nearly equal with the addax (Tables 11 and 13). Notably, the U.S. exported two Critically Endangered species with U.S. origin, despite neither being native to the U.S.: the addax and barasingha (*Rucervus duvaucelii*) (Table 11). Many of the non-native species with U.S. origin that were exported from the U.S., such as Barbary sheep and scimitar oryx, were introduced to the U.S. for the purpose of trophy hunting and are commonly bred and hunted at fenced ranches in Texas and other states for a practice known as "canned hunting."

A tailored component of the trophy industry recognized by many hunters to be in violation of fair chase ethics** , canned hunting operations—also referred to as shooting preserves, captive hunts or game ranches—are private trophy hunting facilities that offer their customers the opportunity to kill exotic and native animals primarily held within fenced areas. For example, some offer hunting of iconic foreign species such as ostriches, zebras and kangaroos[89].

Canned hunting of some ESA-listed species is permitted in the U.S., and animals listed as Threatened or Endangered have been offered for hunts at such facilities in Texas and other states, such as the scimitar oryx (Endangered under the ESA, Extinct in the Wild under IUCN Red List), addax (Endangered under the ESA), Arabian oryx (Endangered under the ESA) and red lechwe (Threatened under the ESA)[90,91]. The red lechwe, for example—of which the U.S. exported 10 (Appendix Table 7) between 2014 and 2018—is an antelope that is native to southern Africa but has also been bred on game ranches in the U.S. for the sole purpose of trophy hunting.

*According to data collected from state agency websites and requests: 41,404 American black bears, 3,492 mountain lions, 1,808 gray wolves were killed by trophy hunters in the U.S. during 2014-2018.

**Many hunters adhere to "fair chase" hunts which, as defined by the Boone and Crockett Club, is "the ethical, sportsmanlike, and lawful pursuit an taking of any free-ranging wild game animal in a manner that does not give the hunter an improper advantage over such animals." Available at *boone- crockett.org/huntingEthics/ethics_fairchase.asp?area=huntingEthics* (last visited June 21, 2022). "The Club recommends that all hunters and hunting clubs or organizations discourage the practice of canned shoots because it violates the principles of fair chase." Available at *boone-crockett.org/bc-position-statement-canned-shoots* (last visited July 11, 2022).

Most Americans would probably be surprised to learn that these non-native species are being trophy hunted in fenced reserves on U.S. soil. Animals raised in captivity for trophy hunting raise serious welfare concerns and provide no conservation benefits. According to the African Lion Working Group, captive-bred lion hunting is "not self-sustaining, does not provide any demonstrated positive benefit to wild lion conservation efforts and therefore cannot be claimed to be conservation"[92]. In addition, hybridization between distinct taxa and loss of genetic integrity is a common result of translocations in South Africa, especially for the purpose of hunting[93], and wildlife ranching in southern Africa has been associated with 'Intentional Genetic Manipulation' for desirable traits, unintentional selection and hybridization[94].

The need for policy reform

The results of this analysis are staggering and at extreme odds with the will of the American public—the majority of which opposes trophy hunting both here in the U.S. and abroad[95]. Species that are at risk or may be at risk of extinction are disproportionately threatened by compounding human-induced mortalities, such as trophy hunting, in addition to habitat loss, poaching and climate change.

The trophy hunting industry is driven by the desire to maximize profits through the commodification of wildlife, with rare, threatened and/or iconic species bringing in the highest profits. This desire to maximize offtake can lead to overexploitation of wildlife, putting the interests of trophy hunters, and the trophy hunting industry, in direct opposition to the conservation needs of the wild animals they are seeking for trophies. The risk of overexploitation is increased from the pressure to maximize trophy hunting quotas coupled with poor population estimates, outdated data, and other threats to wildlife. Yet the U.S. laws that are intended to protect species from such exploitation are often undermined by legal or regulatory exceptions won by the wealthy hunting lobby.

The U.S. has multiple laws and regulations that govern the movement and trade in wildlife within, to and from the U.S. Amongst them, the ESA[39] sets out the primary framework for the domestic and international conservation and protection of threatened and endangered species and their habitats, including the implementation of CITES and the authorization of imports and exports of species listed as Threatened or Endangered. Under CITES, trade in listed species is only permitted if certain criteria are met, including determining that such trade is not detrimental to the survival of the species[40].

The ESA goes a step further and requires that the USFWS determine that the import of an ESA-listed species enhances the survival of the species[127]. Yet the USFWS authorized the import of over 9,000 trophies of CITES-listed mammals categorized as Vulnerable, Endangered and Critically Endangered and over 10,000 trophies of species listed as Threatened or Endangered under the ESA between 2014 and 2018 (Tables 10 and 12).

According to hunting trophy trade permit applications tracked by the USFWS for Fiscal Year 2017, hunting trophies were the dominant use of wildlife where a permit is required[96]. The USFWS has granted exceptions to hunting trophies where other trade is restricted on the alleged basis that trophy hunting enhances the survival of the species in the wild. However, such decisions have been made without adequate evidence that trophy hunting is effective at enhancing the survival of the species. In addition, USFWS has granted import permits despite population data that is outdated, not specific to the local population, or missing important aspects of population demographics. There are also additional indirect effects of trophy hunting that are not fully considered as they require long-term and detailed population monitoring.

U.S. import authorizations often do not adequately consider the biological and ecological value that targeted animals have for the survival of their species and ecosystems nor the compounding negative impacts of the removal of targeted animals.

Due to the selective offtake of trophy hunting, removal of the largest animals with the most impressive physical attributes can destabilize the population and result in unnatural selective pressure[9,97]. For example, studies have demonstrated that trophy hunting has led to changes in physical traits[66,98,99], behavioral traits[100] and life history traits[101,102] in successive generations of populations impacted by trophy hunting. Directly, trophy hunting has contributed to population declines of animals, such as lions[82,83,103,104,105,106,107], leopards[86,87] and mountain lions[108]. Indirectly, trophy hunting has negatively affected the survival of wildlife populations through lowering reproductive output[86], reducing offspring survival[8,14,107,109], lowering adult female survival[14], lowering adult male survival[107], altering age structure[107], altering sex ratio[82], decreasing genetic diversity[110], decreasing abundance[107,110,111] and increasing mortality rates[112]. Further, trophy hunting has disrupted social structure[86,113,114,115,116], altered natural dispersal[110,117,118] and changed behavior[119] which can impact population dynamics and survival. In addition to legal trade, poaching and illegal trade create additional anthropogenic pressure which compound with natural threats.

Importing countries have little oversight in verifying that the trophy import was not detrimental to the survival of species and largely rely only on the exporting country's determination in the matter of satisfying CITES trade requirements. The USFWS's failure to provide public notice or opportunity to comment on applications to import lion and elephant trophies not only is inconsistent with evidence-based decisionmaking but also shields from public view the current scope of trade of these trophies. It is extremely difficult for the public and other stakeholders to trust, contribute to or provide an adequate level of oversight over the decisions made by authorities. The lack of transparency surrounding data and decision-making processes coupled by the influence of profit-driven stakeholders give rise to the opportunity for corruption and overexploitation.

The U.S. has both a moral and legal responsibility to end the import of hunting trophies from species listed on CITES appendices and the ESA either through regulatory reform or legislative action—especially given the significant role of the U.S. in the number of hunting trophies traded globally, the existing legal requirements that trade in such species require non-detriment findings or enhancement findings, and the negative biological and ecological impacts of trophy hunting. Ending U.S. imports of hunting trophies of mammal species listed under CITES or the ESA would be a significant first step in reducing the number of threatened species trophy hunted globally each year.

Such policies must be based in the best available science with transparency and accountability and not under the influence of profit-driven minority stakeholders. Hunters represent a small fraction of the population in the U.S., and trophy hunting—which differs from the most common form of hunting, to kill an animal to obtain meat for human consumption—represents an even smaller makeup of the population. Trophy hunters more often engage in killing carnivores and other predators than subsistence hunters.

According to the 2016 USFWS survey, the nationwide participation rate in hunting is only 4%, and of that only 1.6% of U.S. hunters targeted bears[35]. This was the only carnivore where specific data were provided. The small number of bear hunters demonstrates just how few hunters target large carnivores, even in the country where the vast majority of international trophy hunters reside. Some have also suggested that hunting for large carnivores (i.e., hunting for trophies, not food) may threaten social acceptance for subsistence hunting (e.g., [120]). While trophy hunters represent a very small portion of the U.S. public, they have a significant impact on species conservation and a disproportionate influence over wildlife management policy.

The comparatively minimal profit that the trophy hunting industry may generate does not outweigh the biological and ecological harm or animal welfare concerns it causes, especially because there are alternative revenue streams available for the U.S. government and private American citizens to invest in to support conservation and development efforts. The U.S. government and industry currently take policy stances against contributing to other unethical forms of financial contribution, and trophy hunting should be no different. Threatened and Endangered species are clearly imperiled by the multitude of human-induced mortalities, from poaching, habitat loss and environmental degradation to trophy hunting. If we don't act now to save them, we could lose them forever.

The U.S. must step up and take a leading role in transitioning away from this extreme hunting practice. Here at home, that means ending the trophy hunting of our native wildlife such as American black bears, wolves and mountain lions, among others (Table 7). In the context of foreign species, that means prohibiting the import of hunting trophies of species listed under CITES and the ESA. Encouragingly, such reform is supported by the American public.

A recent national public opinion survey conducted in the U.S. by Remington Research Group demonstrated that the majority of Americans oppose trophy hunting—especially of threatened and endangered species: 76% of respondents opposed trophy hunting and 80% oppose wildlife killing contests; 64% thought that the U.S. should ban trophy hunting of native carnivores in the U.S.; 65% opposed allowing the import of species listed under the ESA; 82% opposed allowing the import of lion and elephant trophies; and 71% said they are less likely to vote for lawmakers who support trophy hunting[95].

Despite such overwhelming public opposition to trophy hunting, the management of the USFWS hunting trophy import permit program costs far more for the agency to implement than the fees generated by applications, and, as such, is subsidized by U.S. taxpayers. The U.S. government has an obligation to its people to be sound stewards of public resources and is required to set fees that are "fair" and that are based on "costs to the Government", the value of the permit to the recipient, the public policy served, and other relevant factors per 31 U.S.C. § 9701(b). For the government to continue authorizing the import of hunting trophies of ESA-listed species is in direct contravention to these obligations.

Conclusion

The findings of this report indicate that the U.S. is the primary destination for trophies from CITES-listed mammal species, comprising 75% of global imports from 2014 to 2018. Therefore, the trophy hunting industry is largely driven by U.S. trophy hunters, and actions taken by the U.S. will be pivotal in directing the future of the industry. The U.S. imported many different species, including trophies from 12,413 CITES-listed mammals considered threatened by the IUCN Red List and trophies from 10,484 mammals listed as Threatened or Endangered by the ESA.

We are living in a period of unprecedented, human-induced biodiversity loss and direct exploitation is a major driver. A recent biodiversity assessment report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services[121] warned that around 1 million wild animal and plant species are threatened with extinction, more than ever before in human history. The direct mortality and additional indirect effects caused by trophy hunting compound with other threats to species survival, such as poaching, conflict with humans and habitat loss (e.g.,[3,4,5,6,7,8,9,10,11,12,13,14]).

Ultimately, this study determined that American trophy hunters had the most significant influence on wildlife worldwide in the context of the number and species of CITES-listed mammals imported and exported as trophies to the U.S. from 2014 to 2018. Through 2018, the U.S. continued to be the largest importer of hunting trophies in the world (Table 1).

Given the significant role of the U.S. in the number of hunting trophies traded globally, the existing legal requirements that trade in species listed under CITES and the ESA require non-detriment findings or enhancement findings, respectively, and the negative biological and ecological impacts of trophy hunting on species' welfare and conservation, the U.S. has both a moral and legal responsibility to end the import of hunting trophies of threatened species either through regulatory reform or legislative action. Ending the import into the U.S. of hunting trophies of mammal species listed under either CITES appendices or the ESA would be a significant step in reducing the number of animals trophy hunted globally weach year.

The findings of this report demonstrate the sheer, unrivaled scope of American consumption of hunting trophies, especially of threatened and endangered species.

This is an alarming signal that U.S. policymakers have the greatest responsibility to strengthen policies that will reduce the demand for and trade in hunting trophies, with a ban on the import of hunting trophies of mammal species listed under CITES appendices and the ESA as an important first step.

References

1. CITES. (n.d.a). Appendices. Retrieved July 8, 2022, from https://cites.org/eng/app/appendices.php.
2. Humane Society of the United States (n.d). Captive Hunts factsheet. Retrieved Jan. 5, 2023, from https://www.humanesociety.org/resources/captive-hunts-fact-sheet.
3. Bischof, R., Swenson, J. E., Yoccoz, N. G., Mysterud, A., & Gimenez, O. (2009). The magnitude and selectivity of natural and multiple anthropogenic mortality causes in hunted brown bears. *Journal of Animal Ecology, 78*(3), 656-665.
4. Chapron, G., & Treves, A. (2016). Blood does not buy goodwill: allowing culling increases poaching of a large carnivore. *Proceedings of the Royal Society B: Biological Sciences, 283*(1830), 20152939.
5. Darimont, C.T., Fox, C.H., Bryan, H.M. & Reimchen, T.E. (2015). The unique ecology of human predators. *Science, 349*(6250), 858-860.
6. Frank, S. C., Ordiz, A., Gosselin, J., Hertel, A., Kindberg, J., Leclerc, M., … & Swenson, J. E. (2017). Indirect effects of bear hunting: a review from Scandinavia. *Ursus, 28*(2), 150-164.
7. Krofel, M., Treves, A., Ripple, W. J., Chapron, G., & López-Bao, J. V. (2015). Hunted carnivores at outsized risk. *Science, 350*(6260), 518-519.
8. Leclerc, M., Frank, S. C., Zedrosser, A., Swenson, J. E., & Pelletier, F. (2017). Hunting promotes spatial reorganization and sexually selected infanticide. *Scientific Reports, 7*(1), 1–6.
9. Milner, J. M., Nilsen, E. B., & Andreassen, H. P. (2007). Demographic side effects of selective hunting in ungulates and carnivores. *Conservation Biology, 21*(1), 36–47.
10. Pitman, R. T., Swanepoel, L. H., Hunter, L., Slotow, R., & Balme, G. A. (2015). The importance of refugia, ecological traps and scale for large carnivore management. *Biodiversity and Conservation, 24*(8), 1975-1987.
11. Ripple, W. J., Newsome, T. M., & Kerley, G. I. (2016). Does trophy hunting support biodiversity? A response to Di Minin et al. *Trends in Ecology & Evolution, 31*(7), 495-496.
12. Santiago-Avila, F. J., Cornman, A. M., & Treves, A. (2018). Killing wolves to prevent predation on livestock may protect one farm but harm neighbors. *PLOS One, 13*(1), e0189729.
13. Santiago-Avila, F. J., Chappell, R. J., & Treves, A. (2020). Liberalizing the killing of endangered wolves was associated with more disappearances of collared individuals in Wisconsin, USA. *Scientific Reports, 10,* 13881.
14. Wielgus, R. B., Morrison, D. E., Cooley, H. S., & Maletzke, B. (2013). Effects of male trophy hunting on female carnivore population growth and persistence. *Biological Conservation, 167,* 69–75.
15. NBC News. (2019, Sept. 6). Trophy hunter who paid $400k to kill rhino allowed to import remains by Trump admin. Retrieved July 12, 2022, from https://www.nbcnews.com/politics/politics-news/trophy-hunter-who-paid-400g-rhino-kill-allowed-import-remains-n1050836.
16. Darimont, C. T., Codding, B. F., & Hawkes, K. (2017). Why men trophy hunt. *Biology Letters, 13*(3), 20160909.
17. Kalof, L. & A. Fitzgerald. (2003). Reading the trophy: exploring the display of dead animals in hunting magazines. *Visual Studies, 18*(2), 112-122.
18. Brower, M. (2005). Trophy shots: Early North American photographs of nonhuman animals and the display of masculine prowess. *Society & Animals, 13*(1), 13-31.
19. Eliason, S. L. (2008). A statewide examination of hunting and trophy nonhuman animals: Perspectives of Montana hunters. *Society & Animals, 16*(3), 256-278.
20. Eliason, S. L. (2012). Reconstructing dead nonhuman animals: Motivations for becoming a taxidermist. *Society & Animals, 20*(1), 1-20.
21. Palazy, L., Bonenfant, C., Gaillard, J. M., & Courchamp, F. (2012). Rarity, trophy hunting and ungulates. *Animal Conservation, 15*(1), 4-11.
22. Johnson, P. J., R. Kansky, A. J. Loveridge, and D. W. Macdonald. (2010). Size, rarity and charisma: Valuing African wildlife trophies. *PLOS One, 5*(9), e12866.
23. Ebeling Schuld, A. M., & Darimont, C. T. (2017). Online hunting forums identify achievement as prominent among multiple satisfactions. *Wildlife Society Bulletin, 41*(3), 523-529.
24. Safari Club International (n.d.). *Record Book.* Retrieved July 1, 2022, from https://safariclub.org/record-book.
25. Safari Club International. (2018). Safari Club International Record Book: World Hunting Award Field Journal. Retrieved July 12, 2022, from https://safariclub.org/wp-content/uploads/2020/05/world-hunting-award.pdf.
26. Wildlife Watch. (2018). Exclusive: An inside look at Cecil the lion's final hours. National Geographic. Retrieved Jan. 5, 2023 from https://www.nationalgeographic.com/animals/article/wildlife-watch-cecil-trophy-hunting-andrew-loveridge.
27. Abebe, B. A., Jones, K. W., Solomon, J., Galvin, K., & Evangelista, P. (2020). Examining social equity in community-based conservation programs: A case study of controlled hunting programs in Bale Mountains, Ethiopia. *World Development, 135,* 105066.
28. Cassidy, L. (2021). Power dynamics and new directions in the recent evolution of CBNRM in Botswana. *Conservation Science and Practice, 3*(1), e205.
29. Koot, S. (2019). The limits of economic benefits: Adding social affordances to the analysis of trophy hunting of the Khwe and Ju/'hoansi in Namibian community-based natural resource management. *Society & Natural Resources, 32*(4), 417-433.
30. Murray, C. K. (2017). *The lion's share? On the economic benefits of trophy hunting. A report for the Humane Society International, prepared by Economists at Large, Melbourne, Australia.* http://www.hsi.org/assets/pdfs/economists-at-large-trophy-hunting.pdf.
31. Good Governance Africa. (2022). Trophy hunting in South Africa: is it worth it? An evaluation of South Africa's policy decision to elevate trophy hunting as a key conservation tool. Retrieved July 12, 2022, from https://digitalmallblobstorage.blob.core.windows.net/wp-content/2022/03/Trophy-Hunting-Working-paper.pdf.
32. Gwiazdon, K. & Bosselmann, K. "Trophy hunting from an ecological and ethical point of view. Re: Imports of hunting trophies of protected species to Germany." (March 28, 2022). IUCN Ethics Specialist Group, World Commission on Environmental Law. Letter.
33. Sheldrick Wildlife Trust. (2014) *Dead or Alive? Valuing an Elephant.* The David Sheldrick Wildlife Trust, Surrey, UK. Available at: https://www.sheldrickwildlifetrust.org/news/updates/elephants-financially-worth-76-times-more-alive-than-dead.
34. Braczkowski, A. R., Balme, G. A., Dickman, A., Macdonald, D. W., Fattebert, J., Dickerson, T., … & Hunter, L. (2015). Who bites the bullet first? The susceptibility of leopards *Panthera pardus* to trophy hunting. *PLOS One, 10*(4), e0123100.
35. United States Fish and Wildlife Service (2018). 2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Retrieved December 15, 2022, https://www.fws.gov/sites/default/files/documents/news-attached-files/nat_survey2016.pdf.
36. Humane Society International Europe (2021). *Trophy Hunting by the Numbers: The European's role in global trophy hunting: Import and Export of CITES listed species between 2014 and 2018.* Retrieved June 10, 2022, from https://www.hsi.org/wp-content/uploads/2021/06/Trophy-hunting-numbers-eu-report.pdf.
37. IUCN Red List. (n.d.a). Background & History. Retrieved July 8, 2022, from, https://www.iucnredlist.org/about/background-history.
38. IUCN Red List. (n.d.b). Frequently Asked Questions. Retrieved July 12, 2022, from https://www.iucnredlist.org/about/faqs.
39. Endangered Species Act, 16 U.S.C. § 1531-1544 (1973). https://www.law.cornell.edu/uscode/text/16/chapter-35.
40. CITES. (n.d.b). The CITES Appendices. Retrieved June 22, 2022, from https://cites.org/eng/app/index.php.
41. Emslie, R. 2020a. *Diceros bicornis. The IUCN Red List of Threatened Species 2020: e.T6557A152728945.* https://dx.doi.org/10.2305/IUCN.UK.2020-1.RLTS.T6557A152728945.en.
42. Emslie, R. 2020b. *Ceratotherium simum* ssp. *simum. The IUCN Red List of Threatened Species 2020: e.T39317A45814320.* https://dx.doi.org/10.2305/IUCN.UK.2020-1.RLTS.T39317A45814320.en.
43. Bauer, H., Packer, C., Funston, P.F., Henschel, P. & Nowell, K. 2016. *Panthera leo* (errata version published in 2017). *The IUCN Red List of Threatened Species 2016: e.T15951A115130419.* https://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T15951A107265605.en.
44. Hunting Legends. (n.d.). *Hunting Lions.* Retrieved April 25, 2022, from http://www.huntinglegends.com/hunting-africa/hunting-big-5-africa/hunting-lions.
45. BookYourHunt.com. (2022). *Zambia – 21 day Lion Hunt.* Book Your Hunt. Retrieved April 25, 2022, from https://www.bookyourhunt.com/en/Tour/19010?SearchTerm=Lion.
46. The High-Level Panel of Experts for the Review of Policies, Legislation and Practices on Matters of Elephant, Lion, Leopard and Rhinoceros Management, Breeding, Hunting, Trade and Handling. (2020). *High-Level Panel Report – For Submission to the Minister of Environment, Forestry and Fisheries.* Retrieved January 18, 2023 from https://www.dffe.gov.za/sites/default/files/reports/2020-12-22_high-levelpanel_report.pdf.
47. TREES (2016). Economic Value of the South African Private Lion Sector. *Tourism Research in Economic Environs & Society, 26.*
48. Ashe, D. (2016). *A Major Step Forward for Lion Conservation in Africa.* The Huffington Post. Retrieved January 18, 2023 from https://www.huffpost.com/entry/a-major-step-forward-for-lion-conservation-in-africa_b_5808f6ffe4b099c434319294?timestamp=1476983176624.
49. Republic of South Africa Department of Forestry, Fisheries and the Environment (2021, May 2). *Statement by Minister Creecy: Release of report of high-level panel 2 May 2021.* Retrieved June 21, 2022, from https://www.dffe.gov.za/speeches/creecy_releaseofhlpreport_pretoria.
50. Creecy, B.D. (2021, May 2). Statement by Minister Creecy: Release of report of High-Level Panel on the management, breeding, hunting, trade and handling of elephant, lion, leopard and rhinoceros. South Africa Department: Forestry, Fisheries and the Environment. https://www.dffe.gov.za/speeches/creecy_releaseofhlpreport_pretoria?fbclid=IwAR071TG1zwa1IX5kpFLvubD6NEhQfmculxdT6rYLBdh-TVPpY6jQn7RHKhU.
51. Gobush, K.S., Edwards, C.T.T, Balfour, D., Wittemyer, G., Maisels, F. & Taylor, R.D. (2021a). *Loxodonta africana* (amended version of 2021 assessment). *The IUCN Red List of Threatened Species 2021: e.T181008073A204401095.* https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T181008073A204401095.en.
52. Gobush, K.S., Edwards, C.T.T, Maisels, F., Wittemyer, G., Balfour, D. & Taylor, R.D. (2021b). *Loxodonta cyclotis* (errata version published in 2021). *The IUCN Red List of Threatened Species 2021: e.T181007989A204404464.* https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T181007989A204404464.en.
53. United States Fish and Wildlife Service ECOS (n.d.). African elephant (*Loxodonta africana*). Retrieved September 1, 2022 https://ecos.fws.gov/ecp/species/7724.
54. Thouless, C.R., Dublin, H.T., Blanc, D.P. Skinner, J.J., Daniel, T.E., Taylor, R.D., Maisels, F., Frederick, H. L. & Bouché P. (2016). *African Elephant Status Report 2016.* https://portals.iucn.org/library/sites/library/files/documents/SSC-OP-060_A.pdf.
55. Scientific American (2009, April 9). *Are Elephant Populations Stable These Days?* Retrieved June 22, 2022, from http://www.scientificamerican.com/article.cfm?id=are-elephant-populations-stable.
56. UNODC, World Wildlife Crime Report. 2020. *Trafficking in Protected Species.* Chapter 3: African Elephant Tusks and Rhinoceros Horns (pp 47-63). Retrieved June 22, 2022, from https://www.unodc.org/documents/data-and-analysis/wildlife/2020/World_Wildlife_Report_2020_9July.pdf.
57. Schlossberg, S., Chase, M. J., Gobush, K. S., Wasser, S. K., & Lindsay, K. (2020). State-space models reveal a continuing elephant poaching problem in most of Africa. *Scientific Reports, 10*(1), 1-9.
58. Cape to Cairo Safaris. (n.d.). *Elephant Hunting.* Retrieved June 22, 2022, from https://huntinafrica.com/elephant-hunting.
59. Luxury Hunts (2019, December 10). Zimbabwe Hunting Safaris. Retrieved June 22, 2022, from https://www.luxuryhunts.com/zimbabwe_hunts.html.
60. Allen, C., Brent, L., Motsentwa, T., Weiss, M., & Croft, D. (2020). Importance of old bulls: leaders and followers in collective movements of all-male groups in African savannah elephants (*Loxodonta africana*). *Scientific Reports, 10,* 13996.
61. Mccomb, K., et al. (2001). Matriarchs as repositories of social knowledge in African elephants. *Science, 292*, 491–494.
62. Chiyo, P.I. et al. (2011). Association patterns of African elephants in all-male groups: the role of age and genetic relatedness. *Animal Behaviour, 81,* 1093–1099.
63. Allen, C.R., Croft, D.P. and Brent, L.J.N. (2021). Reduced older male presence linked to increased rates of aggression to nonconspecific targets in male elephants. *Proceedings of the Royal Society B, 288*(1965).
64. Slotow, R., et al. (2000). Older bull elephants control young males. *Nature,* 408, 425–426.
65. Chiyo, P.I., Obanda, V., & Korir, D.K. (2015). Illegal tusk harvest and the decline of tusk size in the African elephant. *Ecology and Evolution, 5*(22), 5216–5229.
66. Muposhi, V. K., Gandiwa, E., Bartels, P., Makuza, S. M., & Madiri, T. H. (2016). Trophy hunting and sustainability: temporal dynamics in trophy quality and harvesting patterns of wild herbivores in a tropical semi-arid savanna ecosystem. *PLOS One, 11*(10), e0164429.
67. Selier, S. A. J., Page, B. R., Vanak, A. T., & Slotow, R. (2014). Sustainability of elephant hunting across international borders in southern Africa: A case study of the greater Mapungubwe Transfrontier Conservation Area. *The Journal of Wildlife Management,* 78(1), 122-132.
68. Dobson, A., & Poole, J. (1998). Conspecific aggregation and conservation biology. In T. Caro (Ed.), *Behavioural Ecology and Conservation Biology* (pp. 193–208). Oxford University Press.
69. Coverdale, T. C., Kartzinel, T. R., Grabowski, K. L., Shriver, R. K., Hassan, A. A., Goheen, J. R., … & Pringle, R. M. (2016). Elephants in the understory: opposing direct and indirect effects of consumption and ecosystem engineering by megaherbivores. *Ecology, 97*(11), 3219-3230.
70. Govender, N. (2005) *The effect of habitat alteration by elephants on invertebrate diversity in two small reserves in South Africa.* (Masters Thesis). University of KwaZulu-Natal.
71. Jones, C. G., Lawton, J. H., & Shachak, M. (1994). Organisms as ecosystem engineers. In *Ecosystem management* (pp. 130-147). Springer, New York, NY.
72. Kohi, E. M., de Boer, W. F., Peel, M. J., Slotow, R., van der Waal, C., Heitkönig, I. M., … & Prins, H. H. (2011). African elephants *Loxodonta africana* amplify browse heterogeneity in African savanna. *Biotropica, 43*(6), 711-721.
73. Poulsen, J. R., Rosin, C., Meier, A., Mills, E., Nuñez, C. L., Koerner, S. E., … & Sowers, M. (2018). Ecological consequences of forest elephant declines for Afrotropical forests. *Conservation Biology,* 32(3), 559-567.
74. Pringle, R. M. (2008). Elephants as agents of habitat creation for small vertebrates at the patch scale. *Ecology,* 89(1), 26-33.
75. Valeix, M., Fritz, H., Sabatier, R., Murindagomo, F., Cumming, D., & Duncan, P. (2011). Elephant-induced structural changes in the vegetation and habitat selection by large herbivores in an African savanna. *Biological Conservation,* 144(2), 902-912.
76. Cogliano, M. (2022, March 18). *Re: [EXTERNAL] RE: Request to Deny Elephant Trophy Imports from Namibia and Zimbabwe.* Retrieved January 18, 2023 from https://www.nytimes.com/2022/04/01/science/elephant-trophies-hunting.html#:~:text=the%20main%20story-,U.S.%20Allows%20Hunters%20to%20Import%20Some%20Elephant%20Trophies%20From%20African,more%20in%20the%20coming%20months.
77. U.S. House of Representatives. (2020). Further consolidated appropriations act, 2020: Committee print of the Committee on Appropriations, U.S. House of Representatives, on H.R. 1865/public law 116-94 (legislative text and explanatory statement) 591–592. Washington, DC; U.S. Government Publishing Office. Retrieved January 18, 2023, from https://www.govinfo.gov/content/pkg/CPRT-116HPRT38679/pdf/CPRT-116HPRT38679.pdf.
78. U.S. House of Representatives. (2021). Consolidated appropriations act, 2021: Committee print of the Committee on Appropriations, U.S. House of Representatives, on H.R. 133/public law 116-260 (legislative text and explanatory statement) 1359. Washington, DC; U.S. Government Publishing Office. Retrieved January 18, 2023, from https://www.govinfo.gov/content/pkg/CPRT-117HPRT43750/pdf/CPRT-117HPRT43750.pdf.
79. U.S. House of Representatives. (2022). Consolidated appropriations act, 2022: Committee print of the Committee on Appropriations, U.S. House of Representatives, on H.R. 133/public law 117-103 (legislative text and explanatory statement) 1429. Washington, DC; U.S. Government Publishing Office. Retrieved January 18, 2023, from https://www.govinfo.gov/content/pkg/CPRT-117HPRT47048/pdf/CPRT-117HPRT47048.pdf.
80. Stein, A.B., Athreya, V., Gerngross, P., Balme, G., Henschel, P., Karanth, U., Miquelle, D., Rostro-Garcia, S., Kamler, J.F., Laguardia, A., Khorozyan, I. & Ghoddousi, A. 2020. *Panthera pardus* (amended version of 2019 assessment). *The IUCN Red List of Threatened Species* 2020: e.T15954A163991139. https://dx.doi.org/10.2305/IUCN.UK.2020-1.RLTS.T15954A163991139.en.
81. Africa Hunt Lodge (n.d.). *Leopard Hunts.* Retrieved June 22, 2022, from https://africahuntlodge.com/hunting-packages/leopard-hunts.
82. Loveridge, A. J., Searle, A. W., Murindagomo, F., & Macdonald, D. W. (2007). The impact of sport-hunting on the population dynamics of an African lion population in a protected area. *Biological Conservation, 134*(4), 548–558.
83. Croes, B. M., Funston, P. J., Rasmussen, G., Buij, R., Saleh, A., Tumenta, P. N., & de Iongh, H. H. (2011). The impact of trophy hunting on lions (*Panthera leo*) and other large carnivores in the Bénoué Complex, northern Cameroon. *Biological Conservation, 144*(12), 3064–3072.
84. Robinson, H.S., et al. (2008) 'Sink populations in carnivore management: cougar demography and immigration in a hunted population', *Ecological Applications,* 18(4), pp. 1028–1037.
85. Balme G.A. & Hunter L.T.B. (2013). Why leopards commit infanticide. *Animal Behaviour, 86,* 791–799.
86. Balme, G. A., Slotow, R., & Hunter, L. (2009). Impact of conservation interventions on the dynamics and persistence of a persecuted leopard (*Panthera pardus*) population. *Biological Conservation, 142,* 2681–2690.
87. Loveridge, A. J., Sousa, L. L., Seymour-Smith, J. L., Mandisodza-Chikerema, R., & Macdonald, D. W. (2022). Environmental and anthropogenic drivers of African leopard *Panthera pardus* population density. *Biological Conservation, 272,* 109641.
88. Republic of South Africa Department of Forestry, Fisheries and the Environment (2017, January 26). *Environmental Affairs confirms extension of zero quota for leopard hunting in South Africa,* 16 January 2017. Retrieved June 21, 2022, from https://www.dffe.gov.za/event/deptactivity/leopard_trophyhunting_banned.
89. OX Ranch. (n.d.). *Hunting Fees.* OX Ranch Texas. Retrieved January 18, 2023, from https://www.oxhuntingranch.com/hunting/hunting-fees.
90. Lucky 7 Exotics. (2022). Enjoy the Adventure: Prepare to Hunt. Retrieved July 8, 2022, from http://lucky7exotics.com/prices-contacts.
91. Lonesome Bull Ranch. (n.d.) Hunting Package Price List. Retrieved July 8, 2022, from https://lonesomebullranch.com/hunting-package-price-list.
92. African Lion Working Group. (2016). Statement on captive-bred lion hunting and associated activities. Retrieved September 2, 2022, from https://www.africanliongroup.org/uploads/5/0/0/7/5007626/alwg_statement_on_captive-bred_lion_hunting_1.pdf.
93. Gippoliti, S., Robovský, J., & Angelici, F. M. (2021). Taxonomy and translocations of African mammals: a plea for a cautionary approach. *Conservation, 1,* 121–138.
94. Russo, I. R. M., Hoban, S., Bloomer, P., Kotzé, A., Segelbacher, G., Rushworth, I., Birss, C., Bruford, M.W. (2019). 'Intentional Genetic Manipulation' as a conservation threat. *Conservation Genetics Resources, 11,* 237–247.

95. Remington Research Group. (2022). National Public Opinion January 2022. Retrieved July 12, 2022, from *https://www.humanesociety.org/sites/default/files/docs/HSUS_National-Public-Opinion-SCI-Demo-Data.pdf.*

96. Sheikh, P. & Corn, M.L. (2016). *The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).* Congressional Research Service Report. Retrieved June 22, 2022, from *https://sgp.fas.org/crs/misc/RL32751.pdf.*

97. Darimont, C. T., Carlson, S. M., Kinnison, M. T., Paquet, P. C., Reimchen, T. E., & Wilmers, C. C. (2009). Human predators outpace other agents of trait change in the wild. *Proceedings of the National Academy of Sciences of the United States of America, 106*(3), 952–954.

98. Coltman, D. W., O'Donoghue, P., Jorgenson, J. T., Hogg, J. T., Strobeck, C., & Festa-Bianchet, M. (2003). Undesirable evolutionary consequences of trophy hunting. *Nature, 426*(6967), 655–658.

99. Pigeon, G., Festa-Bianchet, M., Coltman, D. W., & Pelletier, F. (2016). Intense selective hunting leads to artificial evolution in horn size. *Evolutionary Applications, 9*(4), 521–530.

100. Leclerc, M., Zedrosser, A., Swenson, J. E., & Pelletier, F. (2019). Hunters select for behavioral traits in a large carnivore. *Scientific Reports, 9*(1), 1–8.

101. Bischof, R., Bonenfant, C., Rivrud, I. M., Zedrosser, A., Friebe, A., Coulson, T., … & Swenson, J. E. (2018). Regulated hunting re-shapes the life history of brown bears. *Nature Ecology and Evolution, 2*(1), 116–123.

102. Van de Walle, J., Pigeon, G., Zedrosser, A., Swenson, J. E., & Pelletier, F. (2018). Hunting regulation favors slow life histories in a large carnivore. *Nature Communications, 9*(1), 1–10.

103. Creel, S., Jassiel, M., Dröge, E., Rosenblatt, E., Becker, M. S., Matandiko, W., & Simpamba, T. (2016). Assessing the sustainability of African lion trophy hunting, with recommendations for policy. *Ecological Applications, 26*(7), 2347–2357.

104. Groom, R. J., Funston, P. J., & Mandisodza, R. (2014). Surveys of lions *Panthera leo* in protected areas in Zimbabwe yield disturbing results: What is driving the population collapse? *Oryx, 48*(3), 385–393.

105. Loveridge, A. J., Valeix, M., Chapron, G., Davidson, Z., Mtare, G., & Macdonald, D. W. (2016). Conservation of large predator populations: Demographic and spatial responses of African lions to the intensity of trophy hunting. *Biological Conservation, 204,* 247–254.

106. Packer, C., Brink, H., Kissui, B. M., Maliti, H., Kushnir, H., & Caro, T. (2011). Effects of trophy hunting on lion and leopard populations in Tanzania. *Conservation Biology, 25*(1), 142-153.

107. Rosenblatt, E., Becker, M. S., Creel, S., Droge, E., Mweetwa, T., Schuette, P. A., … Mwape, H. (2014). Detecting declines of apex carnivores and evaluating their causes: An example with Zambian lions. *Biological Conservation, 180,* 176–186.

108. Packer, C., Kosmala, M., Cooley, H., Brink, H., & Pintea, L. (2009). Sport hunting predator control and conservation of large carnivores. *PLOS One, 4*(6), e5941.

109. Cooley, H. S., Wielgus, R. B., Koehler, G. M., Robinson, H. S., & Maletzke, B. T. (2009). Does hunting regulate cougar populations? A test of the compensatory mortality hypothesis. *Ecology, 90*(10), 2913–2921.

110. Naude, V. N., Balme, G. A., O'Riain, J., Hunter, L. T. B., Fattebert, J., Dickerson, T., & Bishop, J. M. (2020). Unsustainable anthropogenic mortality disrupts natal dispersal and promotes inbreeding in leopards. *Ecology and Evolution, 10*(8), 3605–3619.

111. Searle, C. E., Bauer, D. T., Kesch, M. K., Hunt, J. E., Mandisodza-Chikerema, R., Flyman, M. V., … Loveridge, A. J. (2020). Drivers of leopard (*Panthera pardus*) habitat use and relative abundance in Africa's largest transfrontier conservation area. *Biological Conservation, 248,* 108649.

112. Balme, G. A., Hunter, L., Goodman, P., Ferguson, H., Craigie, J., & Slotow, R. (2010). An adaptive management approach to trophy hunting of leopards (*Panthera pardus*): a case study from Kwazulu-Natal, South Africa. In D. W. Macdonald & A. Loveridge (*Eds.*), *Biology and Conservation of Wild Felids* (1st ed., pp. 341–352). Oxford University Press.

113. Gosselin, J., Leclerc, M., Zedrosser, A., Steyaert, S. M. J. G., Swenson, J. E., & Pelletier, F. (2017). Hunting promotes sexual conflict in brown bears. *Journal of Animal Ecology, 86*(1), 35–42.

114. Swenson, J. E., Sandegren, F., Soderberg, A., Bjarvall, A., Franzen, R., & Wabakken, P. (1997). Infanticide caused by hunting of male bears. *Nature, 386*, 450–451.

115. Frank, S. C., Pelletier, F., Kopatz, A., Bourret, A., Garant, D., Swenson, J. E., … Zedrosser, A. (2020). Harvest is associated with the disruption of social and fine‐scale genetic structure among matrilines of a solitary large carnivore. *Evolutionary Applications, 14*(4), 1023-1035.

116. Maletzke, B. T., Wielgus, R., Koehler, G. M., Swanson, M., Cooley, H., & Alldredge, J. R. (2014). Effects of hunting on cougar spatial organization. *Ecology and Evolution, 4*(11), 2178–2185.

117. Fattebert, J., Balme, G. A., Dickerson, T., Slotow, R., & Hunter, L. (2015). Density-dependent natal dispersal patterns in a leopard population recovering from over-harvest. *PLOS One, 10*(4), 1–15.

118. Elliot, N. B., Valeix, M., Macdonald, D. W., & Loveridge, A. J. (2014). Social relationships affect dispersal timing revealing a delayed infanticide in African lions. *Oikos, 123*(9), 1049–1056.

119. Ordiz, A., Støen, O. G., Sæbø, S., Kindberg, J., Delibes, M., & Swenson, J. E. (2012). Do bears know they are being hunted? *Biological Conservation, 152,* 21–28.

120. Darimont, C. T., Hall, H., Eckert, L., Mihalik, I., Artelle, K., Treves, A., & Paquet, P. C. (2021). Large carnivore hunting and the social license to hunt. *Conservation Biology, 35*(4), 1111-1119.

121. IPBES. (2019). *Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (E.S. Brondizio, J. Settele, S. Díaz, and H.T. Ngo (editors)). IPBES secretariat. *http://ipbes.net/global-assessment.*

122. CITES. (2013). *A guide to using the CITES Trade Database (Version 8, October 2013).* United Nations Environment Programme World Conservation Monitoring Centre. Retrieved June 4, 2022, from *https://trade.cites.org/cites_trade_guidelines/en-CITES_Trade_Database_Guide.pdf.*

123. Moneron, S. & Drinkwater, E. (2021). The Often-Overlooked Ivory Trade - A rapid assessment of the international trade in hippo ivory between 2009 and 2018. TRAFFIC, Cambridge, United Kingdom.

124. Andersson, A., & Gibson, L. (2018). Missing teeth: Discordances in the trade of hippo ivory between Africa and Hong Kong. *African Journal of Ecology, 56*(2), 235-243.

125. Wasser, S. K., Clark, W. J., Drori, O., Kisamo, E. S., Mailand, C., Mutayoba, B., & Stephens, M. (2008). Combating the illegal trade in African elephant ivory with DNA forensics. *Conservation Biology, 22*(4), 1065-1071.

126. 50 C.F.R. § 17.40(r); 80 Fed. Reg. 80,000 (Dec. 23, 2015).

127. 16 U.S.C. § 1539(a)(1)(A); 50 C.F.R. §§ 17.21, 17.22, 17.31, 17.32.

128. 80 Fed. Reg. 42524 (July 17, 2015).

129. United States Fish and Wildlife Service. (2015). Enhancement Finding for African Elephants from Zimbabwe. http://www.fws.gov/international/pdf/enhancement-finding-March-2015-elephant-Zimbabwe.pdf.

130. United States Fish and Wildlife Service. (2014). Enhancement Finding for African Elephants from Zimbabwe. http://www.fws.gov/international/pdf/enhancement-finding-July-2014-elephant-Zimbabwe.pdf.

131. United States Fish and Wildlife Service. (2015). Enhancement Finding for African Elephants from Tanzania. http://www.fws.gov/international/pdf/enhancement-finding-2015-elephant-Tanzania.pdf.

132. United States Fish and Wildlife Service. (2014). Enhancement Finding for African Elephants from Tanzania. http://www.fws.gov/international/pdf/enhancement-finding-2014-elephant-Tanzania.pdf.

133. Marcum v. Salazar, 810 F.Supp.2d 56, 63 (D.D.C. 2011).

134. Marcum v. Salazar, 694 F.3d 123 (D.C.Cir. 2012).

Appendix

Methodology

Data for this report were obtained from the United Nations Environment Program World Conservation Monitoring Centre Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Trade Database (available at https://trade.cites.org) and downloaded on June 4, 2022.

We analyzed trade data for the years 2014-2018, allowing us to examine the trade in trophies during the most recent five-year period where data were available. Data from 2019-2021 were not used because the database was incomplete for these years at the time of analysis. Specifically, the U.S. had not yet reported trade data to the CITES authorities at the time of download. Data were compiled by filtering only for mammal species (Class = "Mammalia") and downloading Comparative Tabulations, with imports calculated based on Importer Reported Quantity and Exports calculated based on Exporter Reported Quantity (unless otherwise stated). Data used in this report examine all trade and so include both direct and indirect trade (i.e., re-exports). Averages were rounded up to the nearest whole number.

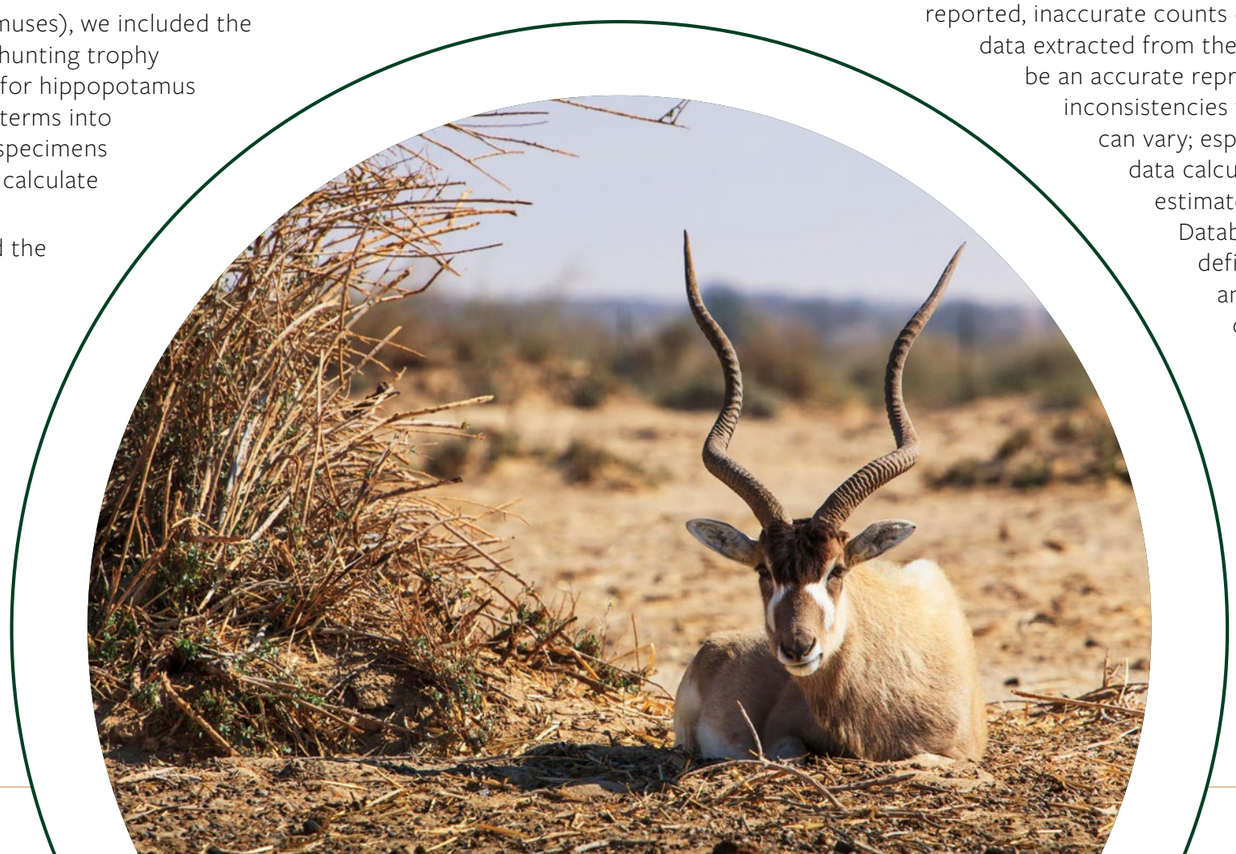
Our goal was to determine the total number of CITES-listed mammals traded as trophies which could then be used to assess the conservation impact of international trophy trade. Therefore, based on information provided in the CITES Trade Database User Guide[122], we used specific criteria to obtain only mammals traded as trophies where the data represents an entire animal (i.e., body parts such as feet or tails were not included). We included the term trophies for personal and hunting trophy purposes with no unit value (which represents the total number of specimens) or a unit of "Number of specimens" for all species.

We also included additional species-specific terms based on these criteria:

- For the order *Artiodactyla* (e.g., antelopes, hippopotamuses), we included the terms bodies, horns, rug, skins, skulls and trophies for hunting trophy purposes. We also included the terms teeth and tusks for hippopotamus (*Hippopotamus amphibius*) where we combined both terms into "tusks" and divided by two where unit was number of specimens and 5.25 where the unit was "kg" (per[123,124]) in order to calculate the number of hippopotamuses traded as trophies.
- For the order *Carnivora* (e.g., bears, lions), we included the terms bodies, rug, skeletons, skins, skulls and trophies for hunting trophy purposes. We also included the term tusks for walrus (*Odobenus rosmarus*) and divided by two where the unit was number of specimens in order to calculate the number of walruses traded as trophies.
- For the order *Cetacea*, narwhal (*Monodon monoceros*) was the only species, and we included the terms trophies and tusks for hunting trophy purposes.
- For the order *Perissodactyla* (e.g., zebras, rhinoceros), we included the terms bodies, horns, rug, skins, skulls and trophies for hunting trophy purposes. We divided horns by two where the unit was number of specimens in order to calculate the number of rhinoceros traded as trophies.
- For the order *Pholidota* (i.e., pangolins), we included the terms skins and trophies for hunting trophy purposes.
- For the order *Primates* (e.g., baboons, monkeys), we included the terms bodies, skeletons, skins, skulls and trophies for hunting trophy purposes.
- For the order *Proboscidea* (i.e., elephants), we included the terms bodies, skins, skulls, trophies and tusks for hunting trophy purposes. For "tusks," we divided by two where the unit was number of specimens or by 6.6 where the unit was "kg" (per[125]) in order to calculate the number of African elephants (*Loxodonta africana*) traded as trophies. There was also one Asian elephant (*Elephas maximus*) trophy included in the dataset, however the term was "trophies," so we did not have to use a different conversion factor for tusks belonging to Asian elephants.
- For the order *Rodentia* (e.g., porcupines, agoutis), we included the terms bodies, skins and trophies for hunting trophy purposes.

For the above terms, where appropriate, quantities measured in the unit "g" were converted to kilograms. In addition, values were rounded up to the nearest whole number since a fraction of an individual animal indicates that an entire animal was killed for those body parts.

The WCMC-CITES Trade Database is widely accepted as the best source of international wildlife trade data, despite the following known and accepted limitations. First, it only includes CITES-listed species. Second, as with most large-scale databases with many different reporters, there are known inconsistencies. These may include misinterpretations with how data should be reported, inaccurate counts or typographical errors. Despite some inaccuracies, data extracted from the WCMC-CITES Trade Database are understood to be an accurate representation of wildlife trade. Third, due to some inconsistencies with reporting and incomplete data, interpretations can vary; especially since CITES does not set exact rules for data calculations. Therefore, we have used conservative estimates based on our understanding of the CITES Trade Database User Guide[122] and only included data that were defined as trophies (either by the Term or Purpose) and represented an entire animal. We used the comparative tabulation reports since, according to the CITES Trade Database User Guide[122], they provide the most comprehensive output and are less likely to overestimate trade levels. Finally, it is also important to note that the WCMC-CITES Trade Database is continually updated, thus there may be differences between datasets that were downloaded on different dates.



Appendix Tables

This report only captures the trade in trophies of CITES-listed mammals (not all trophy trade).

1. Captive-sourced lion trophies imported into the U.S.

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
South Africa	373	459	285	43	10	234	1,170	~100%
Namibia	0	1	0	0	0	1	1	<1%
Tanzania	1	0	0	0	0	1	1	<1%
Grand Total	**374**	**460**	**285**	**43**	**10**	**-**	**1,172**	**-**

Table based on importer reported quantities. Taxon filtered for *Panthera leo*, Source filtered for bred in captivity ("C"), born in captivity ("F") or ranched ("R").

2. U.S. trophy imports that originated in Canada by species

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
American black bear (*Ursus americanus*)	7,148	8,703	8,670	8,530	11,940	8,999	44,991	92%
Gray wolf (*Canis lupus*)	406	485	403	439	393	426	2,126	4%
Brown bear (*Ursus arctos*)	159	161	130	138	94	137	682	1%
Mountain lion (*Puma concolor*)	135	122	123	131	141	131	652	1%
Canada lynx (*Lynx canadensis*)	93	102	109	90	164	112	558	1%
Bobcat (*Lynx rufus*)	13	9	16	16	21	15	75	<1%
Wood bison (*Bison bison athabascae*)	7	6	14	0	0	6	27	<1%
North American river otter (*Lontra canadensis*)	4	2	7	1	3	4	17	<1%

2. U.S. trophy imports that originated in Canada by species, continued

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Texas wolf (*Canis lupus monstrabilis*)	0	2	11	2	0	3	15	**<1%**
Indian wolf (*Canis lupus pallipes*)	0	0	0	4	0	1	4	**<1%**
Mayan white-tailed deer (*Odocoileus virginianus mayensis*)	0	0	0	0	2	1	2	**<1%**
Glacier bear (*Ursus americanus emmonsii*)	0	0	0	0	2	1	2	**<1%**
Lutra spp.	0	0	0	0	1	1	1	**<1%**
Lutrinae spp.	1	0	0	0	0	1	1	**<1%**
Ursus spp.	0	0	0	0	1	1	1	**<1%**
Grand Total	**7,966**	**9,592**	**9,483**	**9,351**	**12,762**	**-**	**49,154**	**-**

Table based on importer reported quantities.

3. U.S. imports of wild-sourced trophies

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
American black bear (*Ursus americanus*)	7,123	8,656	8,668	8,533	11,635	8,923	44,615	**64%**
Chacma baboon (*Papio ursinus*)	582	622	647	509	612	595	2,972	**4%**
Hartmann's mountain zebra (*Equus zebra hartmannae*)	539	591	590	502	514	548	2,736	**4%**
Gray wolf (*Canis lupus*)	391	473	410	439	407	424	2,120	**3%**
Leopard (*Panthera pardus*)	328	398	333	269	290	324	1,618	**2%**
Brown bear (*Ursus arctos*)	205	224	237	272	250	238	1,188	**2%**

3. U.S. imports of wild-sourced trophies, continued

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Vervet monkey (*Chlorocebus pygerythrus*)	169	186	222	198	405	236	1,180	**2%**
Blackbuck (*Antilope cervicapra*)	146	237	278	271	247	236	1,179	**2%**
Hippopotamus (*Hippopotamus amphibius*)	188	192	215	210	240	209	1,045	**1%**
Red lechwe (*Kobus leche*)	146	174	184	188	334	206	1,026	**1%**
African elephant (*Loxodonta africana*)	463	183	150	134	61	199	991	**1%**
Lion (*Panthera leo*)	360	325	190	52	49	196	976	**1%**
Caracal (*Caracal caracal*)	195	239	204	167	169	195	974	**1%**
Bighorn sheep (*Ovis canadensis*)	109	141	128	148	173	140	699	**1%**
Mountain lion (*Puma concolor*)	141	128	122	152	145	138	688	**1%**
Siberian ibex (*Capra sibirica*)	85	123	150	117	160	127	635	**1%**
Canada lynx (*Lynx canadensis*)	89	101	105	88	162	109	545	**1%**
Blue duiker (*Philantomba monticola*)	62	86	65	135	86	87	434	**1%**
African civet (*Civettictis civetta*)	77	87	89	71	87	83	411	**1%**
Yellow baboon (*Papio cynocephalus*)	92	89	56	82	63	77	382	**1%**
Black rhinoceros (*Diceros bicornis*)	0	3	0	0	1	1	4	**<1%**
Other (72 species)	520	730	696	679	678	661	3,303	**5%**
Grand Total	**12,010**	**13,988**	**13,739**	**13,216**	**16,768**	**-**	**69,721**	**-**

Table based on importer reported quantities. Source filtered for wild ("W"). Species that represent less than 1% of grand total are collapsed into "Other."

4. U.S. imports of captive-sourced trophies

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Lion (*Panthera leo*)	374	460	285	43	10	235	1,172	**56%**
Red lechwe (*Kobus leche*)	124	136	157	129	108	131	654	**31%**
Barbary sheep (*Ammotragus lervia*)	13	15	18	14	19	16	79	**4%**
Bighorn sheep (*Ovis canadensis*)	0	10	11	11	2	7	34	**2%**
Hog deer (*Axis porcinus*)	0	5	4	7	12	6	28	**1%**
Blackbuck (*Antilope cervicapra*)	2	6	3	0	5	4	16	**1%**
Gray wolf (*Canis lupus*)	15	1	0	0	0	4	16	**1%**
Mountain lion (*Puma concolor*)	4	1	5	4	1	3	15	**1%**
Bontebok (*Damaliscus pygargus pygargus*)	2	2	2	6	1	3	13	**1%**
American black bear (*Ursus americanus*)	4	2	2	1	3	3	12	**1%**
Aardwolf (*Proteles cristata*)	0	0	1	4	2	2	7	**<1%**
Vervet monkey (*Chlorocebus pygerythrus*)	2	0	0	0	4	2	6	**<1%**
Caracal (*Caracal caracal*)	0	1	3	0	0	1	4	**<1%**
Canada lynx (*Lynx canadensis*)	3	1	0	0	0	1	4	**<1%**
Hartmann's mountain zebra (*Equus zebra hartmannae*)	0	1	1	0	1	1	3	**<1%**
Hippopotamus (*Hippopotamus amphibius*)	0	0	2	1	0	1	3	**<1%**
Blue duiker (*Philantomba monticola*)	0	3	0	0	0	1	3	**<1%**

4. U.S. imports of captive-sourced trophies, continued

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Wild goat (*Capra hircus aegagrus*)	0	1	0	0	1	1	2	**<1%**
Serval (*Leptailurus serval*)	0	0	0	1	1	1	2	**<1%**
Scimitar oryx (*Oryx dammah*)	0	1	0	0	1	1	2	**<1%**
Leopard (*Panthera pardus*)	0	2	0	0	0	1	2	**<1%**
Sonoran pronghorn (*Antilocapra americana sonoriensis*)	0	0	0	0	1	1	1	**<1%**
African civet (*Civettictis civetta*)	0	0	0	0	1	1	1	**<1%**
Domestic sheep (*Ovis aries*)	0	1	0	0	0	1	1	**<1%**
Grand Total	**543**	**649**	**494**	**221**	**173**	**-**	**2,080**	**-**

Table based on importer reported quantities. Source filtered for bred in captivity ("C"), born in captivity ("F") or ranched ("R").

5. Global exporters of trophies according to importer reported quantities

Exporting country	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Canada	8,722	10,132	10,147	9,905	13,153	10,412	52,059	**54%**
South Africa	3,204	3,570	3,184	2,826	3,039	3,165	15,823	**16%**
Namibia	1,769	2,239	2,229	2,020	2,320	2,116	10,577	**11%**
Zimbabwe	1,266	1,180	892	666	863	974	4,867	**5%**
Tanzania	491	475	359	326	291	389	1,942	**2%**
Russia	291	275	408	382	477	367	1,833	**2%**
Argentina	232	341	341	335	339	318	1,588	**2%**

5. Global exporters of trophies according to importer reported quantities, continued

Exporting country	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Mexico	124	182	186	249	248	198	989	1%
Zambia	70	75	143	264	436	198	988	1%
Mozambique	235	223	124	237	146	193	965	1%
Kyrgyzstan	95	158	166	173	155	150	747	1%
Tajikistan	73	104	101	164	155	120	597	1%
Botswana	444	104	37	4	0	118	589	1%
United States	169	164	83	110	62	118	588	1%
Other (76 countries)	491	564	577	609	502	549	2,743	3%
Grand Total	**17,676**	**19,786**	**18,977**	**18,270**	**22,186**	**-**	**96,895**	**-**

Table based on importer reported quantities. Countries that represent less than 1% of grand total are collapsed into "Other."

6. U.S. trophy exports by country of origin

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
United States	214	195	108	125	148	158	790	68%
Canada	43	44	11	37	100	47	235	20%
South Africa	0	17	5	14	7	9	43	4%
Mexico	4	2	3	17	3	6	29	2%
Russia	3	6	0	0	2	3	11	1%
Zimbabwe	1	5	4	0	1	3	11	1%
Tanzania	5	4	0	0	0	2	9	1%
Unknown	0	2	1	4	2	2	9	1%

6. U.S. trophy exports by country of origin, continued

Country of origin	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Zambia	1	4	0	4	0	2	9	1%
Other (9 countries)	6	8	5	3	1	5	23	2%
Grand Total	**277**	**287**	**137**	**204**	**264**	**-**	**1,169**	**-**

Table based on exporter reported quantities. Countries that represent less than 1% of grand total are collapsed into "Other."

7. U.S. trophy exports by species

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
American black bear (*Ursus americanus*)	71	68	25	63	109	68	336	29%
Brown bear (*Ursus arctos*)	76	84	32	31	49	55	272	23%
Mountain lion (*Puma concolor and Puma concolor couguar*)	35	37	12	17	17	24	118	10%
Barbary sheep (*Ammotragus lervia*)	15	15	8	14	35	18	87	7%
Blackbuck (*Antilope cervicapra*)	17	22	11	12	7	14	69	6%
Gray wolf (*Canis lupus*)	13	11	4	7	4	8	39	3%
Lion (*Panthera leo*)	2	11	2	10	4	6	29	2%
Bobcat (*Lynx rufus*)	5	5	1	5	9	5	25	2%
Bighorn sheep (*Ovis canadensis*)	4	1	3	14	2	5	24	2%
Addax (*Addax nasomaculatus*)	8	0	7	4	2	5	21	2%
Scimitar oryx (*Oryx dammah*)	6	2	7	5	1	5	21	2%
Red lechwe (*Kobus leche*)	0	5	3	1	1	2	10	1%

7. U.S. trophy exports by species, continued

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Nilgai (*Boselaphus tragocamelus*)	0	3	3	2	1	2	9	1%
Markhor (*Capra falconeri*)	4	1	1	2	1	2	9	1%
Canada lynx (*Lynx canadensis*)	4	1	0	2	2	2	9	1%
Leopard (*Panthera pardus*)	3	6	0	0	0	2	9	1%
Hippopotamus (*Hippopotamus amphibius*)	0	3	0	4	0	2	7	1%
Arabian oryx (*Oryx leucoryx*)	2	0	3	0	1	2	6	1%
African elephant (*Loxodonta africana*)	1	2	1	0	0	1	4	<1%
Other (38 species)	11	10	14	12	19	14	66	6%
Grand Total	**277**	**287**	**137**	**204**	**264**	**-**	**1,169**	**-**

Table based on exporter reported quantities. Species that represent less than 1% of grand total are collapsed into "Other."

8. U.S. exports of Scimitar-oryx with U.S. origin by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Born in captivity	6	1	6	4	1	4	18	90%
Bred in captivity	0	1	1	0	0	1	2	10%
Grand Total	**6**	**2**	**7**	**4**	**1**	**-**	**20**	**-**

Table based on exporter reported quantities. Taxon filtered for *Oryx dammah*. Corresponding source codes: Born in captivity ("F"), Bred in captivity ("C"),

9. U.S. imports of Scimitar-oryx by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Wild	0	1	0	1	9	3	11	79%
Seized	0	0	0	2	0	1	2	14%
Bred in captivity	0	1	0	0	0	1	1	7%
Grand Total	**0**	**2**	**0**	**3**	**9**	**-**	**14**	**-**

Table based on importer reported quantities. Taxon filtered for *Oryx dammah*. Corresponding source codes: Wild ("W"), Seized ("I"), Bred in captivity ("C").

10. U.S. exports of Barbary sheep with U.S. origin by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Wild	2	10	3	5	29	10	49	60%
Born in captivity	12	1	3	7	6	6	29	35%
Bred in captivity	1	0	1	0	0	1	2	2%
Ranched	0	0	1	0	0	1	1	1%
Seized	0	1	0	0	0	1	1	1%
Grand Total	**15**	**12**	**8**	**12**	**35**	**-**	**82**	**-**

Table based on exporter reported quantities. Taxon filtered for *Ammotragus lervia*. Corresponding source codes: Wild ("W"), Seized ("I"), Bred in captivity ("C").

11. U.S. exports of addax with U.S. origin by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Born in captivity	8	0	7	4	2	5	21	100%
Grand Total	**8**	**0**	**7**	**4**	**2**	**-**	**21**	**-**

Table based on exporter reported quantities. Taxon filtered for *Addax nasomaculatus*. Corresponding source codes: Born in captivity ("F").

12. U.S. exports of dama gazelle with U.S. origin by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Born in captivity	0	0	2	1	0	1	3	100%
Grand Total	**0**	**0**	**2**	**1**	**0**	**-**	**3**	**-**

Table based on exporter reported quantities. Taxon filtered for *Nanger dama*. Corresponding source codes: Born in captivity ("F").

13. Global trophy imports by species

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
American black bear (*Ursus americanus*)	7,700	9,081	9,148	8,981	12,350	9,452	47,260	49%
Hartmann's mountain zebra (*Equus zebra hartmannae*)	1,158	1,506	1,413	1,264	1,433	1,355	6,774	7%
Chacma baboon (*Papio ursinus*)	998	1,000	1,060	1,017	1,032	1,022	5,107	5%
African elephant (*Loxodonta africana*)	1,479	924	618	544	534	820	4,099	4%
Lion (*Panthera leo*)	953	1,257	753	450	357	754	3,770	4%
Leopard (*Panthera pardus*)	665	762	663	560	617	654	3,267	3%
Grey wolf (*Canis lupus*)	551	590	539	530	474	537	2,684	3%
Brown bear (*Ursus arctos*)	512	490	575	552	540	534	2,669	3%
Hippopotamus (*Hippopotamus amphibius*)	426	405	502	475	624	487	2,432	3%
Red lechwe (*Kobus leche*)	366	412	458	494	604	467	2,334	2%
Caracal (*Caracal caracal*)	337	363	321	302	285	322	1,608	2%
Blackbuck (*Antilope cervicapra*)	227	352	361	318	332	318	1,590	2%

13. Global trophy imports by species, continued

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Vervet monkey (*Chlorocebus pygerythrus*)	212	237	258	279	472	292	1,458	2%
Siberian ibex (*Capra sibirica*)	89	162	213	238	252	191	954	1%
Cougar (*Puma concolor*)	207	175	146	198	190	184	916	1%
Bighorn sheep (*Ovis canadensis*)	110	155	144	162	177	150	748	1%
Blue duiker (*Philantomba monticola*)	108	126	106	196	143	136	679	1%
Yellow baboon (*Papio cynocephalus*)	147	146	84	168	110	131	655	1%
Canada lynx (*Lynx canadensis*)	119	108	127	113	174	129	641	1%
African civet (*Civettictis civetta*)	121	126	138	111	123	124	619	1%
Southern white rhinoceros (*Ceratotherium simum simum*)	88	113	114	116	81	103	512	1%
Argali sheep (*Ovis ammon*)	87	132	107	122	63	103	511	1%
Black rhinoceros (*Diceros bicornis*)	2	13	2	3	3	5	23	<1%
Other (117 species)	1,014	1,151	1,127	1,077	1,216	1,117	5,585	6%
Grand Total	**17,676**	**19,786**	**18,977**	**18,270**	**22,186**	**-**	**96,895**	**-**

Table based on importer reported quantities. Species that represent less than 1% of grand total are collapsed into "Other".

14. Lion trophies imported into the U.S. by source

Source	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Bred in captivity	370	457	285	43	10	233	1,165	**54%**
Wild	360	325	190	52	49	196	976	**45%**
Seized	5	5	8	0	1	4	19	**1%**
Born in captivity	4	3	0	0	0	2	7	**<1%**
Pre-Convention	2	0	0	0	0	1	2	**<1%**
Grand Total	**741**	**790**	**483**	**95**	**60**	**-**	**2,169**	**-**

Table based on importer reported quantities. Taxon filtered for *Panthera leo*. Corresponding source codes: Bred in captivity ("C"), Wild ("W"), Seized ("I"), Born in captivity ("F"), Pre-convention ("O").

15. American black bear trophies traded from Canada to the U.S.

Reporter	2014	2015	2016	2017	2018	Total
U.S. reported imports	7,155	8,709	8,683	8,542	11,799	**44,888**
Canada reported exports	**2,319**	**2,411**	**2,293**	**2,452**	**2,462**	**11,937**

Table based on importer reported quantities for U.S. data and exporter reported quantities for Canada data. Importer filtered for United States. Exporter filtered for Canada. Taxon filtered for *Ursus americanus.*

16. U.S. exports of trophies with U.S. origin to by species

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Brown bear (*Ursus arctos*)	26	23	16	9	17	19	91	**36%**
Barbary sheep (*Ammotragus lervia*)	9	6	2	3	30	10	50	**20%**
American black bear (*Ursus americanus*)	12	8	11	8	4	9	43	**17%**

16. U.S. exports of trophies with U.S. origin to by species, continued

Species	2014	2015	2016	2017	2018	Average per year	Grand Total	Percent of Grand Total
Blackbuck (*Antilope cervicapra*)	4	8	5	3	4	5	24	**9%**
Mountain lion (*Puma concolor*)	8	2	0	2	4	4	16	**6%**
Gray wolf (*Canis lupus*)	4	2	0	0	0	2	6	**2%**
Bobcat (*Lynx rufus*)	1	2	0	0	2	1	5	**2%**
Scimitar oryx (*Oryx dammah*)	0	2	2	1	0	1	5	**2%**
Canada lynx (*Lynx canadensis*)	0	1	0	1	1	1	3	**1%**
Addax (*Addax nasomaculatus*)	0	0	1	0	1	1	2	**1%**
Markhor (*Capra falconeri*)	1	0	0	1	0	1	2	**1%**
North American river otter (*Lontra canadensis*)	0	0	0	0	2	1	2	**1%**
Nilgai (*Boselaphus tragocamelus*)	0	1	0	0	0	1	1	**<1%**
Northern Rocky Mountain wolf (*Canis lupus irremotus*)	0	0	0	1	0	1	1	**<1%**
Siberian ibex (*Capra sibirica*)	0	0	0	0	1	1	1	**<1%**
White-nosed Coati (*Nasua narica*)	1	0	0	0	0	1	1	**<1%**
Domestic sheep (*Ovis aries*)	0	1	0	0	0	1	1	**<1%**
Transcaspian Urial (*Ovis cycloceros arkal*)	1	0	0	0	0	1	1	**<1%**
Blue Sheep (*Pseudois nayaur*)	0	0	0	0	1	1	1	**<1%**
Grand Total	**67**	**56**	**37**	**29**	**67**	**-**	**256**	**-**

Table based on exporter reported quantities. Importer filtered for Canada. Exporter and Origin filtered for United States.

Who we are

We think big. We are fearless. We stand up and fight for all animals who are suffering.

We work around the globe to protect wildlife, improve farm animal welfare, promote animal-free testing methods and end industries that exploit animals. Through our rescue, response and sanctuary work, as well as other direct services, we help thousands of animals in need. With your support, we are working to end all forms of animal cruelty and achieve the vision behind our name: a humane society.

THE HUMANE SOCIETY OF THE UNITED STATES

humanesociety.org

HUMANE SOCIETY INTERNATIONAL

hsi.org

HUMANE SOCIETY LEGISLATIVE FUND™

hslf.org

PHOTO CREDITS: DESIGN PICS INC/ALAMY LTD, AUGUSTSNOW/ALAMY LTD, WLDAVIES/ISTOCK.COM, TON KOENE/ALAMY LTD, JOHN MORRISON/ISTOCK.COM, JUKKA JANTUNENSHUTTERSTOCK.COM, REPINA VALERIYA/SHUTTERSTOCK, ROBERTHARDING/ALAMY LTD, BYRDYAK/ISTOCK.COM, AGEFOTOSTOCK/ALAMY LTD, DIANE ISABEL/SHUTTERSTOCK, EVGENY555/ISTOCK.COM, ACCEPTPHOTO/ALAMY LTD, THE HSUS, ZSOLT BICZO/SHUTTERSTOCK, THE HSUS, GINA KELLY/ALAMY LTD, TOM REICHNER/SHUTTERSTOCK, WLDAVIES/ISTOCK.COM, MAGGYMEYER/ISTOCK.COM, WALDO SWIEGERS/AP IMAGES FOR HUMANE SOCIETY INTERNATIONAL, KENNETH CANNING/ISTOCK.COM, JOHAN63/ISTOCK.COM, VOLODYMYR BURDIAK/SHUTTERSTOCK.COM, ANTON SOROKIN/ALAMY LTD, VISUAL COMMUNICATIONS/ISTOCK.COM, MATTHEW PRESCOTT/THE HSUS, THE HSUS, MARCO VALENTINI/ALAMY LTD, STOCK VNDRPTTN/ISTOCK.COM, E2DAN/SHUTTERSTOCK.COM, CAROLE DESCHUYMERE/ALAMY LTD, MARTIN HARVEY/ALAMY LTD, DESIGN PICS INC/ALAMY LTD, ROLF NUSSBAUMER PHOTOGRAPHY/ALAMY LTD, VOLODYMYR BURDIAK/ALAMY LTD, MATTHEW PRESCOTT/THE HSUS, WIRESTOCK CREATORS/SHUTTERSTOCK, SUEDDEUTSCHE ZEITUNG PHOTO/ALAMY LTD, COLDSNOWSTORM/ISTOCK.COM, DESIGN PICS INC/ALAMY LTD, GHOST BEAR/SHUTTERSTOCK, ASTAKHIN EVGENY/SHUTTERSTOCK