

Supplementary Material

Table S1: Other (sub-)species held in captivity in the Free State, South Africa, apart from lions, including their IUCN Status (CR=Critically Endangered, EN=Endangered, LC=Least Concern, NT=Near Threatened, VU=Vulnerable) and the number of registered permit holders keeping these (sub) species in the Free State.

Common Name	Scientific Name	IUCN Status	Native	Permit Holders
Caracal	<i>Caracal caracal</i>	LC	Native	44
Serval	<i>Leptailurus serval</i>	LC	Native	43
Cheetah	<i>Acinonyx jubatus</i>	VU	Native	26
Bengal tiger	<i>Panthera tigris tigris</i>	EN	Non-native	23
Meerkat	<i>Suricata suricatta</i>	LC	Native	22
Spotted hyena	<i>Crocota crocuta</i>	LC	Native	20
Leopard	<i>Panthera pardus</i>	VU	Native	15
Bat-eared fox	<i>Otocyon megalotis</i>	LC	Native	14
African wild dog	<i>Lycaon pictus</i>	EN	Native	13
Black-backed jackal	<i>Canis mesomelas</i>	LC	Native	12
Vervet monkey	<i>Chlorocebus pygerythrus</i>	LC	Native	11
African wild cat	<i>Felis lybica</i>	LC	Native	9
Black-footed cat	<i>Felis nigripes</i>	VU	Native	8
Common genet	<i>Genetta genetta</i>	LC	Native	8
Chacma baboon	<i>Papio ursinus</i>	LC	Native	5
Cape porcupine	<i>Hystrix africaeaustralis</i>	LC	Native	4
Banded mongoose	<i>Mungos mungo</i>	LC	Native	4
Jaguar	<i>Panthera onca</i>	NT	Non-native	4
Cape fox	<i>Vulpes chama</i>	LC	Native	4
European Wolf	<i>Canis lupus lupus</i>	LC	Non-native	3
South American coati	<i>Nasua nasua</i>	LC	Non-native	3

Common Name	Scientific Name	IUCN Status	Native	Permit Holders
Brown hyena	<i>Parahyaena brunnea</i>	NT	Native	3
Common warthog	<i>Phacochoerus africanus</i>	LC	Native	3
Southern African hedgehog	<i>Atelerix frontalis</i>	LC	Native	2
Common marmoset	<i>Callithrix jacchus</i>	LC	Non-native	2
Yellow mongoose	<i>Cynictis penicillata</i>	LC	Native	2
Northern lesser Galago	<i>Galago senegalensis</i>	LC	Non-native	2
Siberian tiger	<i>Panthera tigris altaica</i>	EN	Non-native	2
Aardwolf	<i>Proteles cristata</i>	LC	Native	2
Impala	<i>Aepyceros melampus</i>	LC	Native	1
De Brazza's monkey	<i>Cercopithecus neglectus</i>	LC	Non-native	1
North American porcupine	<i>Erethizon dorsatum</i>	LC	Non-native	1
Cape genet	<i>Genetta tigrina</i>	LC	Native	1
Common slender mongoose	<i>Herpestes sanguineus</i>	LC	Native	1
Hippopotamus	<i>Hippopotamus amphibius</i>	VU	Native	1
Striped hyena	<i>Hyaena hyaena</i>	NT	Non-native	1
Honey badger	<i>Mellivora capensis</i>	LC	Native	1
Suni	<i>Nesotragus moschatus</i>	LC	Native	1
Tiger	<i>Panthera tigris</i>	EN	Non-native	1
South China tiger	<i>Panthera tigris amoyensis</i>	CR	Non-native	1
Hamadryas baboon	<i>Papio hamadryas</i>	LC	Non-native	1
Common palm civet	<i>Paradoxurus hermaphroditus</i>	LC	Non-native	1
Sugar glider	<i>Petaurus breviceps</i>	LC	Non-native	1
Rock hyrax	<i>Procavia capensis</i>	LC	Native	1
Northern racoon	<i>Procyon lotor</i>	LC	Non-native	1
Puma	<i>Puma concolor</i>	LC	Non-native	1
Steenbok	<i>Raphicerus campestris</i>	LC	Native	1

Common Name	Scientific Name	IUCN Status	Native	Permit Holders
Cape Grysbok	<i>Raphicerus melanotis</i>	LC	Endemic	1
Black-capped Capuchin	<i>Sapajus apella</i>	LC	Non-native	1
Common duiker	<i>Sylvicapra grimmia</i>	LC	Native	1
Bushbuck	<i>Tragelaphus scriptus ornatus</i>	LC	Native	1
Black bear	<i>Ursidae</i>	NA	Non-native	1
Asiatic black bear	<i>Ursus thibetanus</i>	VU	Non-native	1
Striped ground squirrel	<i>Xerus erythropus</i>	LC	Non-native	1
South African ground squirrel	<i>Xerus inauris</i>	LC	Native	1

Table S2: Types of permits per permit holders

Activities	Number of permit holders
Captivity	54
Transport	4
Euthanasia	3
Captivity, Transport	47
Captivity, Euthanasia	10
Euthanasia, Transport	2
Transport, Hunting	1
Captivity, Euthanasia, Transport	19
Captivity, Transport, Hunting	1

Table S3: Distribution of permit holders who had permits in non-consecutive years

Year combination	Number of permit holders regardless of lion identity	Number of permit holders with the same animals across a gap year & (minimum number of the same lions)
2017, 2018, 2020	5	5 (40)
2017, 2019, 2020	3	2 (13)
2017, 2020	2	0 (0)
2017, 2019	13	9 (92)
2018, 2020	5	4 (39)
Total	28	20 (184)

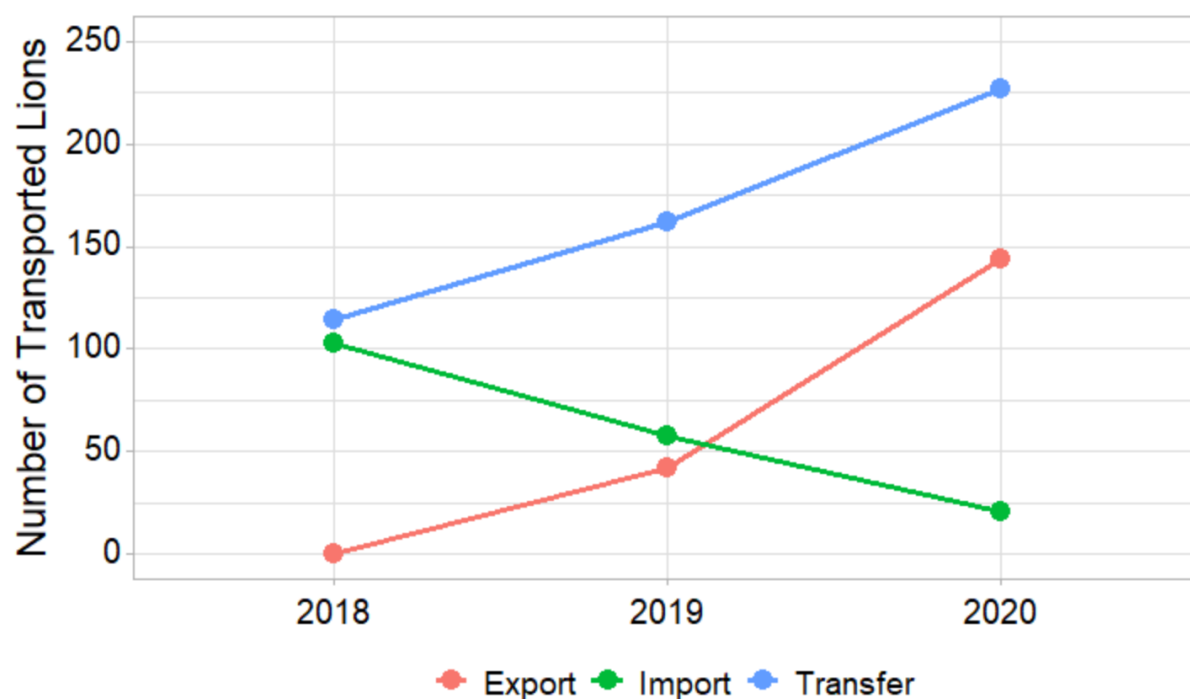


Figure S1: Transports of lions within, to, and from the Free State, South Africa, from 2018 to 2020.

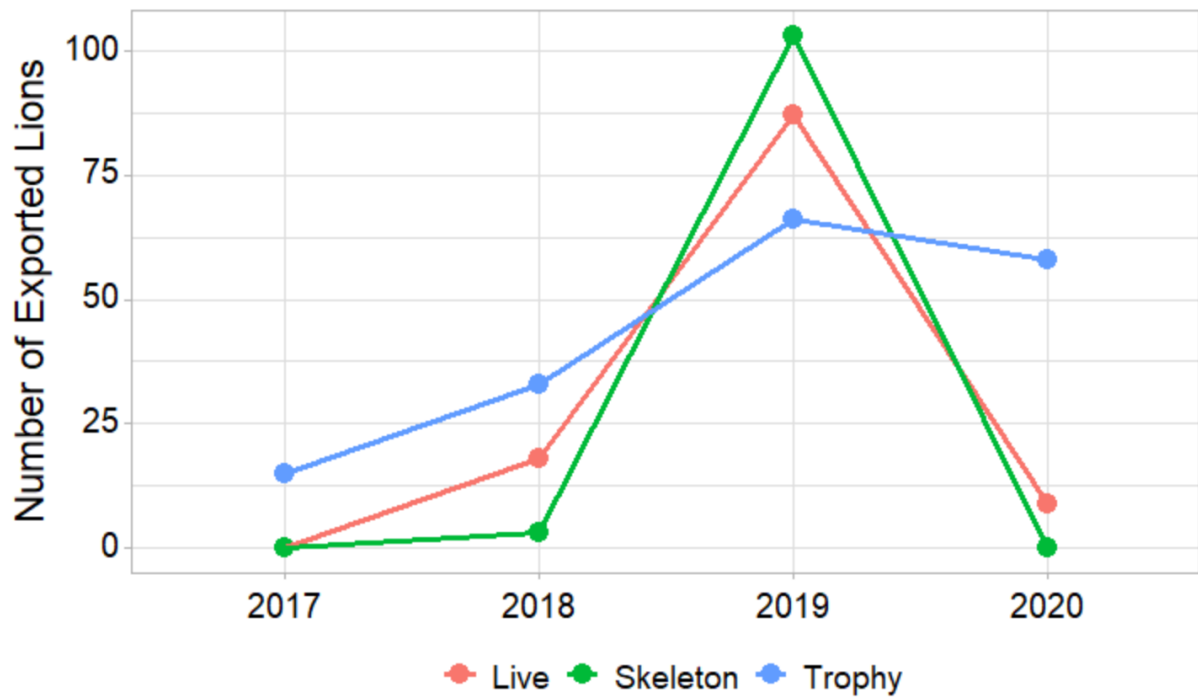


Figure S2: Number of CITES exported lion commodities from the Free State, South Africa, from 2017 - 2020.