

# **A Final Report on Assessment of the Impacts of Wildlife Trade in Relation to Conservation in Mong La city, east of Shan State, Myanmar-China border city**

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## **Abstract**

*Assessment of the impacts of wildlife trade in relation to conservation in Mong La city, east of Shan State, Myanmar-China border city, was conducted over one years (October 2014 to October 2015). A range of wildlife species was for sale at markets in Mong La city on the border with China. Items observed at the survey site included animal skins, whole animals and body parts, primarily for use in traditional medicine and for decoration; live animals were on sale to be kept as pets and wild meat for food. A total of 48 species were recorded, of which 33 species are afforded some degree of protection under Myanmar's national wildlife legislation and/or are listed in the CITES Appendices or in IUCN globally threatened categories. Only 20 of the 48 species observed were not listed in the CITES Appendices. Fifteen of the 48 species were not legally protected in the MWPL.*

## **Introduction**

Nowadays, wildlife is more and more becoming extinct in the wild due to various reasons such as habitat loss, pollution, human intervention, and commercial use of wildlife and its products. All human societies use wildlife directly and/or indirectly. Wild animals are caught in the wild for the use of their skins, bodies, derivatives and parts as wildlife products or traditional medicines. Live animals are also trade for pets. The financial incentive is the key factor to generate the trade whether it is for the livelihood of an individual hunter or for the profit of a multinational corporation. The trade in wildlife has pushed species such as tigers and rhinos, to the edge of extinction and continues to pose a major threat to many others (Animal Welfare Issues).

Myanmar is one of the most biologically diverse country in oriental region. Different type of habitats and ecosystem from pine and conifer forest from northern Himalayan range to mangrove in coastal area and tropical forest in southern part of Taninthayi. Covering a total land area of 677 0002, it is home to many rare, endangered and endemic species. The economy is largely based on agriculture, with some 80% of the population residing in rural areas and dependent on forest resources for their livelihoods (NCEA, 1997). With a rising human population of 57.5 million (Myanmar Statistical Year Book, 2008), and a growing economy, habitats have been degraded, which has resulted in a steady decline in some wildlife species and other natural resources (AIT Research, 2000). Major threats include deforestation, fire, timber cutting, flooding, landslides, and other human-related impacts. One of these is the trade in wildlife, which is seen as a very important source of income

generation within the country (Martin, 1997), bringing many benefits through employment to rural communities, the business sector and to the national economy. At the same time, such trade poses a serious conservation threat to many species (Saw Han, 1992).

Mong La is situated in 'Special Region 4' in Shan State in eastern Myanmar on the border with China. Special Region 4 is controlled by Sai Leung (also known as Lin Min Xiang) and is policed by the 3,000-strong National Democratic Alliance Army of the Eastern Shan State that enforces its own set of laws (Oswell 2010); the Myanmar central government have limited authority in Mong La. Mong La's position on the border with China's Yunnan Province facilitates cross-border trade. Starting in June 1989, when Special Region 4 was granted virtual autonomy, the town was developed by Chinese investors and focuses on the entertainment industry, with numerous nightclubs, brothels, exotic meat restaurants, and 24-hour casinos (Davies 2005). About 80% of the people working and living in the area are Chinese. Therefore, although there are strict regulations governing their collection, effective law enforcement is too weak to stop wildlife collection, transportation and demand (Nijman *et al.* 2014).

The present research is carried out with the following objectives: to investigate which wildlife species are being traded and to assess the status of protection afforded to those species in trade and to investigation trade routes.

## Legislation

The *Myanmar Wildlife Protection Law (MWPL)* consists of a number of categories that relate to the threat to survival of species in Myanmar, in accordance with the *Protection of Wild Animals, Wild Plants, and Conservation of Natural Areas Act 15(A), 1994*. Species are afforded varying degrees of protection according to their designation:

**Completely Protected (CP):** Completely Protected species may not be hunted except for scientific purposes under a special licence.

**Protected (P):** Protected species may be hunted but only with special permission such as for public awareness or scientific research.

**Seasonally Protected (SP):** Seasonally Protected species are subject to traditional subsistence hunting by rural communities only during the non-breeding season. Mammalian species are protected between 15 June and 30 September and avian species between 15 March and 30 September (MOECAAF, 2003).

There are very limited legal provisions for the domestic and international trade of wildlife species from Myanmar. Protected species and restrictions relating to hunting methods are defined under the 1994 *Myanmar Wildlife Protection Law* which states that capturing and "raising" any species requires the direct permission of the Director General of the Forest Department. Wildlife trade is therefore broadly considered to be illegal by government officials, while the legal framework is actually insufficient to deal with the complexities of the issue (Min, 2012).

## Methods

The study was undertaken for one year between October 2014 and October 2015. The main study site was Mong La market which is located in Mong La city, eastern Shan State, on the border with China. A map of the study area is shown in Fig. 1. The research was based mainly on field studies and involved interviews with local people and on direct observations. Visits to the study site was undertaken once per two months every day for a period of circa two weeks or more during the course of the survey period, totally one year research. In order to assess

hunting and wildlife trade pattern, sets of questionnaires were used. Information relating to identification of the species hunted, trade routes and sources were collected via interviews with villagers, hunters, small scale dealers, middlemen and other traders.

Each survey was consisted of both interviews with traders and observations and counting of wildlife parts and derivatives at the market. All species and their parts observed were recorded by taking photos. All specimens were openly displayed, and there was no need to resort to undercover techniques to obtain the relevant data. An obligatory guide from Mong La provided the necessary translations. Species that could not be readily identified were photographed for further reference.

There are three distinct ways in wildlife trade in Mong La; first, specialized permanent wildlife shops are spread out over the town, selling ivory, wild cat skins, trophies, etc.; second, the morning market in the central town square sells a combination of live or freshly killed animals and dried animal products; and third, a row of some 15 restaurants sell wild meat, displaying live animals in cages and tubs on the street in front of the restaurants. (Shepherd and Nijman, 2007; Felbab-Brown, 2011; Nijman and Shepherd, 2014)

Identification of species follows Lekagul and McNeely (1977), Groves (2001), Martin *et al.* (2001), Win Maung and Win Ko Ko (2002) and Francis (2008). The conservation status of the species recorded is in accordance with national protection categories set down in the *Myanmar Wildlife Protection Law (MWPL)* (1994); the IUCN-Red List of Threatened Species (IUCN, 2015), and in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 2015).

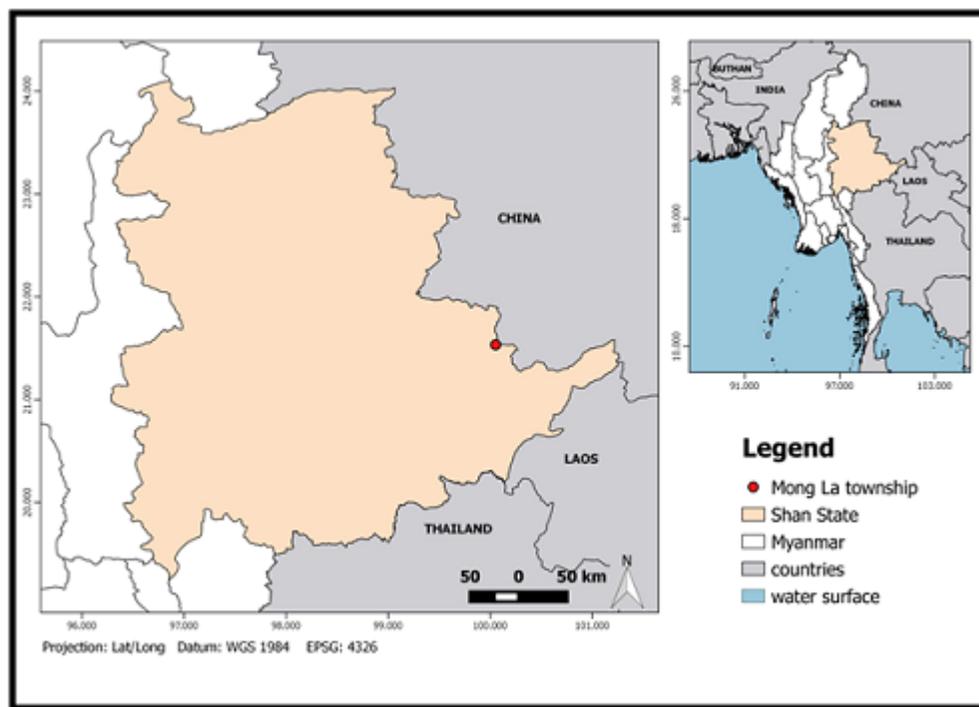


Fig . 1. Location map of Mong La in Shan State, Myanmar.

## Results

In all, a total of 48 wildlife species were offered for sale. Out of these, 27 species of mammals, 14 species of birds and 7 reptile species were recorded as the traded species in Mong La market. Most of species been listed under nationally and/ or globally threatened categories under the *Myanmar Wildlife Protection Law 1994 (MWPL)*, the IUCN Red List, and/or in the CITES Appendices. Twelve (or 25% of the total recorded in this survey), were of completely protected species listed in *MWPL*; two and six species (4% and 13% of total) were classified by IUCN as Critically Endangered and Endangered (IUCN, 2015); and 13 species (27% of total) were listed in CITES Appendix I (CITES, 2015). Only 20 of the 48 species observed were not listed in the CITES Appendices. Fifteen of the 48 species were not legally protected in the *MWPL*. Altogether 68% of traded species were concerned under wildlife protection categories.

According to the results obtained from nationally and/or globally threatened categories, two Critically Endangered species, six Endangered species, 12 vulnerable species, four Near-threatened species and 23 Least concern species were recorded in trade in IUCN Red List (2015); each of 13 species observed were listed Appendix I, II and two in Appendix III under CITES (2015) and 12 completely protected

species, 17 normally protected species and four seasonal protected species in MWPL (1994) were recorded. The highest number of traded wildlife species on sale (56%) were recorded in Mammals species (Table 1).

A total of 16 vendors were selling wildlife products in morning market in Mong La during the survey period. Most of vendors were recorded as road-side shops in the morning market.

A combination of freshly killed animals and dried or durable parts (horns, antlers, etc.) were observed. A total of 14 wild animal body parts were recorded in trade during the study period, including skulls, carapaces, antlers, horns, skins, canines, gall bladders, stomachs, paws, bones, dried genitals, tusks, skeletons, phalanges, hooves, tendons, legs and quills. A large proportion of these parts are used for traditional medicine. It was difficult to be certain that the figures recorded over the period of the survey did not include double-counting. While the sale of some items, such as meat, was likely to be frequent, it was less easy to establish turnover for some of the other items on sale.

Tokay Gecko *Gekko gecko*, Red Muntjak *Muntiacus muntjak* and East Asian Porcupine *Hystrix brachyura* in trade were recorded as the most observed wildlife parts on the market.

Overall, information gathered from interviews and from direct observations, showed that the number of items in trade was found to be increasing each time during the study period, including; sales of Tiger *Panthera tigris*, Asian Elephant *Elephas maximus*, Chinese Pangolin *Manis pentadactyla*, Chinese Serow *Capricornis milneedwardsii*, Red Muntjac *Muntiacus muntjak*, East Asian Porcupine *Hystrix brachyura*, Asiatic Black Bear *Ursus thibetanus*, Gibbon species, and small carnivores species.

At a souvenir shop near the market, tiger skins and leopard skins were openly displayed for sale in the showcase. However, it is highly unlikely that any of the dealers in the market had the required permits, as they were aware that their activities were illegal and were very wary when questioned or when photos were taken.

Some specimens included the carapace of a turtle, scutes from a tortoise, dried genitals from civets, canines and claws from small carnivores were recorded but could not identified at least to genus level.

Questionnaire interview was cannot conducted in Mong La to investigate trade routes. However, according to local people most of wildlife species come via central Myanmar as well as come from outside Myanmar, for example, Saiga *Saiga tatarica*, Alligator Snapping Turtle *Macrochelys temminckii* and Chinese Soft-shell Turtle *Pelodiscus sinensis* were recorded as exotic species.

**Table 1. Mammals species and their body parts recorded for sale in Mong La market, October 2014 to October 2015, and their conservation status.**

No.	Common Name	Scientific Name	Conservation Status			Observed Parts	Observed Amount
			IUCN	CITES	MWPL		
1	Asian Elephant	<i>Elephas maximus</i>	EN	I	CP	Pieces of skins	700
						Tusks	3 pairs
2	Tiger	<i>Panthera tigris</i>	EN	I	CP	Hands with claws	20
						Bones	5
						Canines	4 pairs
3	Leopard	<i>Panthera pardus</i>	NT	I	CP	Skins	10
4	Clouded Leopard	<i>Neofelis nebulosa</i>	VU	I	CP	Skulls with teeth	7
						Lower jaw with teeth	4
5	Leopard cat	<i>Prionailurus bengalensis</i>	LC	II	P	Skins	2
6	Masked Palm Civet	<i>Paguma larvata</i>	LC	-	P	Dead body	1
7	Spotted Linsang	<i>Prionodon pardicolor</i>	LC	I	CP	Tails	1
8	Chinese Pangolin	<i>Manis pentadactyla</i>	CR	II	CP	Skins,	18
						Scales	impossible to count
9	Asiatic Black Bear	<i>Ursus thibetanus</i>	VU	I	P	Skins	2
						Canines	20 pairs
						Skulls	3
10	Eld's Deer	<i>Rucervus eldii</i>	EN	I	CP	Antlers	2
11	Guar	<i>Bos gaurus</i>	VU	I	CP	Horns	10 pairs
						Head with horns	15
						Gall bladders	10
12	Sambar	<i>Rusa unicolor</i>	VU	-	P	Antlers,	20
						Legs with hooves	30
13	Saiga*	<i>Saiga tatarica</i>	CR	II	-	Horns	20 pairs
14	Chinese Serow	<i>Capricornis milneedwardsii</i>	NT	I	-	Horns,	15 pairs
						Heads with horns	20

						Legs with tendons and hooves,	25
15	Red Muntjac	<i>Muntiacus muntjak</i>	LC	-	SP	Skins,	2
						Antlers	100
						Head with antlers	20
						Dead body	1
						Tails	50
16	Black Giant Squirrel	<i>Ratufa bicolor</i>	NT	II	-	Tails	3
17	Particolored flying squirrel	<i>Hylopetes alboniger</i>	LC	-	-	Live	2
18	East Asian Porcupine	<i>Hystrix brachyura</i>	LC	-	-	Quills	abundant
						Stomach	30
19	Asiatic Brush-tailed Porcupine	<i>Atherurus macrourus</i>	LC	-	-	Dead body (fresh)	3
20	Eurasian Wild Pig	<i>Sus scrofa</i>	LC	-	-	Tusks	20
						Lower jaws with tusks	5
21	Slow Loris	<i>Nycticebus coucang</i>	VU	I	P	Live	1
						Skins	6
						Paws	25
						Skeletons	10
22	Stump-Tailed Macaque	<i>Macaca arctoides</i>	VU	II	P	Live,	2
23	Assamese macaque	<i>Macaca assamensis</i>	NT	II	P	Live	3
24	Pig-Tailed Macaque	<i>Macaca nemestrina</i>	VU	II	P	Live	2
25	Rhesus macaque	<i>Macaca mulatta</i>	LC	II	P	Live	2
26	Langur	<i>Trachypithecus sp.</i>	EN	I	P	Skins	1
27	Gibbon	<i>Hylobates sp.</i>	EN	II	CP	Paws	6

**Table 2. Birds species and their body parts recorded for sale in Mong La market, October 2014 to October 2015, and their conservation status.**

Note: VU-Vulnerable; LC-least concern; II-Appendix II; III Appendix III; CP-Completely Protected species; P-Normally Protected; SP-Seasonal Protected.

No.	Common Name	Scientific Name	Conservation Status			Observed Parts	Observed Amount
			IUCN	CITES	MWPL		
1	Barn Owl	<i>Tyto alba</i>	LC	II	CP	Live	4
2	Silver Pheasant	<i>Lophura nycthemera</i>	LC	-	-	Dead	2
3	White-rumped shama	<i>Copsychus malabaricus</i>	LC	-	-	Dead	2
4	Eye-browed thrush	<i>Turdus obscurus</i>	LC	-	SP	Dead	3
5	Budgerigar (common pet parakeet)	<i>Melopsittacus undulatus</i>	LC	-	-	Live	20
6	Cockatiel	<i>Nymphicus hollandicus</i>	LC	-	-	Live	30
7	Black-throated laughing thrush	<i>Garrulax chinensis</i>	LC	-	P	Live	6
8	Chestnut-tailed starling	<i>Sturnia malabarica</i>	LC	-	-	Live	4
9	White-cheeked starling	<i>Stumus cineraceus</i>	LC	-	-	Live	4
10	Common Hill myra	<i>Gracula religiosa</i>	LC	II	CP	Live	20
11	Rufous-bellied niltava	<i>Niltava sundara</i>	LC	-	-	Dead	3
12	White-tail robin	<i>Cinclidium leucurum</i>	LC	-	SP	Dead	2
13	Grey-sided thrush	<i>Turdus feae</i>	VU	-	SP	Dead	2
14	India Peafowl	<i>Pavo cristatus</i>	LC	III	P	Feathers	impossible to count

**Table 3. Reptiles species and their body parts recorded for sale in Mong La market, October 2014 to October 2015, and their conservation status.**

Note: EN-Endangered species; VU-Vulnerable; NT-Lower Risk Near Threatened; LC-least concern; I-Appendix I; II-Appendix II; III Appendix III; CP-Completely Protected species; P-Normally Protected; SP-Seasonal Protected. \* = Exotic species

No.	Common Name	Scientific Name	Conservation Status			Observed Parts	Observed Amount
			IUCN	CITES	MWPL		
1	Big-headed Turtle	<i>Platysternon megacephalum</i>	EN	I	CP	Live	1
2	Chinese Soft-shell Turtle*	<i>Pelodiscus sinensis</i>	VU	-	P	Live	15
3	Impressed Tortoise	<i>Manouria impressa</i>	VU	II	P	Live,	3
						Carapaces	2
4	Alligator Snapping Turtle*	<i>Macrochelys temminckii</i>	VU	III	P	Live	1
5	Asian Water Monitor	<i>Varanus salvator</i>	LC	II	P	Live	1
						Dead	1
6	Burmese Python	<i>Python molurus</i>	VU	I	P	Live	1
						Skins	8
						Skeleton	3
7	Tokay Gecko	<i>Gekko gecko</i>	NT	-	-	Dry body	150

## Discussion and Conclusion

Mong La, its close location to China and the need by people for hard currency has resulted in the unsustainable exploitation of the State's natural resources. Investigations during the course of the survey found that illegal wildlife dealers use well established and highly organized cross-border networks.

Animal body parts are mainly used as ingredients in traditional medicines, as well as collectors' trophies, decorations and as luxury items. Live animals are sold as pets or for fresh food, as well as for zoological exhibits, or may be killed for just a single body part—for example, gall bladders from bears.

Overall, information gathered from interviews and from direct observations, showed that the number of items in trade was found to be increasing each time during the study period, including; sales of Tiger *Panthera tigris*, Asian Elephant *Elephas maximus*, Chinese Pangolin *Manis pentadactyla*, Chinese Serow *Capricornis milneedwardsii*, Red Muntjac *Muntiacus muntjak*, East Asian Porcupine *Hystrix brachyura*, Asiatic Black Bear *Ursus thibetanus*, Gibbon species, and small carnivores species. It may be assumed that most of wildlife species will be going to extinct for near future.

According to results obtained from the market survey, mammal species were traded as the most common species in the use of traditional medicine. This finding indicates that mammal species was seen to be the most demand species in traded species used for traditional medicine as well as various goods for human use including souvenir, ornaments and decoration.

In view of the testimonies of those interviewed that the trade in most wildlife species and related products was increasing each time, it is possible that these practices are contributing to the overexploitation of wildlife resources in the region.

Oswell and Davies (2002) recorded more than 17 animal species at the Mong La market and a nearby shop in January to February 2002. Moreover, Shepherd and Nijman (2007) recorded 32 species were offered for sale, i.e. four species of birds, 21 species of mammals and seven reptile species at the Mong La market in 2007. According to their observation records, the trade in wildlife species were increasing year after year. Therefore, trade demands and hunting pressure may concern one of the factors in over exploitation of wildlife resources. Moreover, Leopard *Panthera pardus*, Saiga *Saiga tatarica* and Alligator Snapping Turtle *Macrochelys temminckii* were not included in their records. It may be assumed that these species were observed as the first recorded species in the Mong La market.

The fact that all specimens observed in the Mong La market were openly displayed demonstrates the blatant disregard for national legislation—or at least a lack of awareness of a law that is inadequately enforced.

Shepherd and Nijman (2007) reported without effective monitoring and regulation, and increased efficiency of law enforcement, Myanmar's wildlife will continue to be depleted. Oswell and Davies (2002) indicate that the primary purpose of much of this trade is to supply the demand from China, and indeed that wildlife is being imported into China.

Although little is known about the extent of wildlife trade within and from Myanmar, it is well known that China is a major consumer of wildlife from neighbouring countries (Yiming and Dianmo, 1998; Yiming and Wilcove, 2005), including Myanmar (Yiming *et al.*, 2000).

Additional monitoring and research on the trade in animals and plants from Myanmar is needed, in combination with increased law enforcement co-ordination between Myanmar authorities and their counterparts in China. Information should be provided to the national authorities and/or the international conservation community whenever possible. The Myanmar Government recognizes that increased co-operation and communication with

China, and with all neighbouring countries, is essential in controlling the cross-border trade and in effectively implementing CITES (Compton, 2003).

Mong La is situated in a Special Development Zone in the Shan State adjacent to Yunnan Province. The Myanmar central government have limited authority in Mong La. Mong La's position on the border with China's Yunnan Province allows for cross-border trade with Chinese. While Mong La is situated within Myanmar its outlook is firmly directed to China. Therefore, enforcement efforts need to be stepped up considerably, ideally with the backing of the Myanmar and Chinese central government. I would like to recommend that the Myanmar and Chinese CITES authorities come liaise urgently - joined if possibly by the local Mong La rulers- as to resolve the illicit trade of wildlife and wildlife products across their borders. Owing to lax law enforcement, inadequate penalties, limited public awareness of the problem, weak border controls and the perception of high profit and low risk, the illegal smuggling of wildlife and derivatives in this region is still very active.

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The author at *Mong La Central Market*



**A**



**B**



**C**



**D**



**E**



**F**



**G**



**H**

Road-side shops of various wildlife parts display for sale in Mong La market (A to H)



Asian Water Monitor



Big-headed Turtle and Impressed Tortoise



dead song birds (left) and Barn Owls (right)



A dead juvenil Red Muntjac (left) and Burmese Python awaiting sale at the market (right)



Baby Macaque *Macaca* sp. in the cages



Silver Pheasant, Asiatic Brush-tailed Porcupine (left) and Masked Palm Civet (right)



Leopard Skins



Fake Tiger hands



Sambar Antlers and Python Skins

Slow loris skeletons and Serow horns



Key chains made of Slow Loris paws



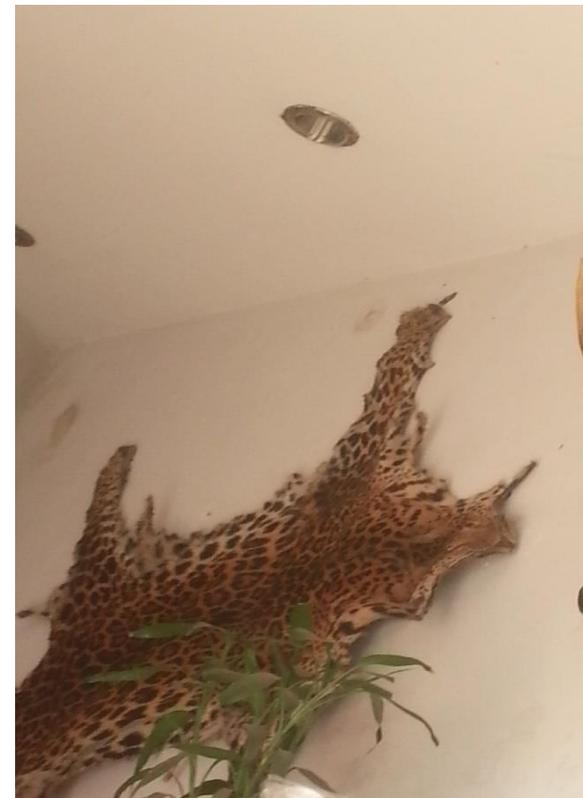
Key chains made of Muntjac horns



Dried Gecko



Saiga Horns



Leopard skin and Sambar antler display at a souvenir shop near the market