

# GOLDEN ROCK REVISITED: WILDLIFE FOR SALE AT KYAIKTIYO, MYANMAR

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**M**yanmar is widely recognized as an important country for biodiversity conservation. With the democratization process now under way and many of the former sanctions lifted, Myanmar is showing rapid economic growth and has strengthened its trading relations with neighbouring countries, especially China. This process offers opportunities and challenges and, of these, curbing the illegal wildlife trade and regulating the legal trade is paramount. Protected wildlife remains openly offered for sale in many towns and cities (Davies, 2005; Shepherd and Nijman, 2008), and several of these centres of wildlife trade have been brought into the spotlight by conservationists and the media alike (e.g. Oswell, 2010; Felbab-Brown, 2011; Nijman and Shepherd, 2015). One of them is Mount Kyaiktiyo, also known as Golden Rock, in Mon State. Situated 160 km (a 3.5 hr drive) from Yangon, it is Myanmar's third-most important sacred Buddhist site. The Golden Rock is a 7 m tall boulder with an equally tall pagoda on top—both covered in gold leaf—that balances on a ledge of the 1100 m tall Mount Kyaiktiyo. Visitors can make the journey to the summit by lorry, or on foot by walking the last 1.5 km.





While Kyaiktiyo is frequently and correctly mentioned as a centre for wildlife trade (Arnold, 2015; Aye Sapay Phyu, 2015; Shepherd and Nijman, 2008; Scharf, 2013), only once has a full inventory of all wildlife for sale been published. In April 2000, Shepherd (2001) visited Kyaiktiyo for two days, identified the species on offer and quantified the different body parts for sale. Nijman and Shepherd (2017) presented a focused account of ethnopharmacological uses of the wildlife for sale at Kyaiktiyo but excluded all species that were not explicitly traded as traditional medicine. Martin (1997) tabulated the number of parts of six species for sale at Kyaiktiyo based on a visit made by a third party in January 1996, but possibly only high-profile species were recorded, and apparently in one shop only. In 2015 and 2017, the first author of this report had the opportunity to conduct repeat surveys.

## WILDLIFE SURVEYS

Kyaiktiyo was visited on two occasions: 30 June 2015 and 21 January 2017. The first author surveyed the central area and roads leading to the Golden Rock pagoda as well as many of the stairways and alleyways leading to the central area. The trade was open and there was no need to resort to undercover techniques. In both years, discussions were held with traders who were generally willing to provide information on the goods being offered for sale. In 2017, because of the very large number of visitors present, fewer discussions were held compared to 2015. Taking photographs was generally not appreciated by traders and photographs were therefore taken infrequently so as not to attract attention. The focus was on animals, and not on plants or fungi.

Animals are sold and displayed in various forms in Kyaiktiyo, including whole carcasses, body parts that can be identified to genus or species level (e.g. skins, legs, heads, antlers, skulls) and ones that cannot (post-cranial bones, partial carcasses, fresh or cooked meat, body parts soaked in dark oil), worked parts (e.g. sawn antlers), and animal fat and oils (some of mixed origin and often mixed with fragrant wood chips). Each has its own identification problems, and the focus here is on those items that could be identified to the species or genus level, or to other higher groups (primates, carnivores, snakes). Most (17/25) shops prominently displayed a large bowl with rendered animal parts, layers of animal fat, herbs and fragrant wood chips; this infusion forms the basis of the traditional medicinal oil that is subsequently bottled. Animal parts placed on the top of these bowls were mostly identifiable but submerged or covered specimens were not, resulting in an underestimation of the amount of wildlife present. Shops only offering wildlife derivatives (i.e. mostly bottles of oil or fat) but not displaying any animal body parts are not included in this analysis.

### Species and body parts on display

The 2015 survey coincided with a low period in the pilgrimage calendar, resulting in few visitors and many

restaurants and shops, including those selling wildlife, were closed. The 2017 survey by contrast was carried out during the peak pilgrimage season, which runs from November to March. No species was observed in 2015 that was not also observed in 2017 and the quantitative assessment below is based on the 2017 survey only. The qualitative assessment based on observations and discussions with vendors relates to information obtained during both surveys.

Twenty-five outlets, out of an estimated several hundred, were openly selling and displaying wildlife, i.e. 23 shops were selling body parts and traditional medicine and two restaurants were selling fresh and prepared wild meat and serving wild meat dishes. Four outlets were situated on the top of the mountain along the roads leading to the Golden Rock itself but the majority, including the two restaurants, were on the various steep stairways leading up to the Golden Rock.

Most species were offered for use as traditional medicines, with some parts also offered as trophies or for ornamental use (e.g. skins, tails, teeth). Very few species were sold for ornamental purposes only. Each vendor produced their own traditional medicine, comprising a mixture of rendered animal parts and fragrant wood (mostly *Eucalyptus*). While it was not possible to determine the age of any of the body parts, the closure of most shops in the summer months suggests that many parts used for medicinal purposes have a turnover of less than a year (a small proportion may be retained for the next pilgrimage season or may be trafficked further afield). Furthermore, given the generally low prices that individual pieces of wildlife command, it does not make sense economically to retain a large stock, again suggesting a fast turnover.

A minimum of 26 species was recorded, including 18 that are legally protected in Myanmar and 11 that are globally threatened according to IUCN criteria (Tables 1 and 2). Judging by the number of body parts on offer, the most common species in trade were squirrels (mostly *Tamiops* spp.), serow *Capricornis* spp., Asiatic Black Bear *Ursus thibetanus* and macaques *Macaca* spp. Many of the globally threatened species Shepherd recorded in 2000 (Shepherd, 2001) were observed in 2017, often in similar quantities (Table 2). The number of body parts on offer from large cats, bears and serows was especially worrying (cf Leupen *et al.*, 2017). Body parts of protected species were as openly displayed as those of non-protected species and the skins of Leopards *Panthera pardus* prominently displayed in shops, or the numerous serow heads placed on top of rendering pots, show vendors have little fear in displaying their goods.

## LEGISLATION

Myanmar has been a Party to CITES since 1997 and joined the ASEAN-Wildlife Enforcement Network in 2005, thus indicating a clear commitment to biodiversity conservation and sustainable use of wildlife. Protection of wildlife in Myanmar is largely covered by the

# SHORT REPORT

Species	National Protection	IUCN Category	Parts	No. seen	Comments
Pangolin <i>Manis</i> spp.	Completely protected	CR	scales	12	
Macaque <i>Macaca</i> spp.	Normally Protected		skull	36	
Langur <i>Trachypithecus</i> spp.	Normally Protected	NT/VU/EN	skull	20	
			tail	5	species ID uncertain
Gibbon <i>Hoolock</i> spp.	Completely protected	VU/EN	skull	1	
Primate			skull	14	fragments
Asiatic Black Bear <i>Ursus thibetanus</i>	Normally Protected	VU	skull	10	
			paws	5	
			canines	50	some may have been Sun Bear <i>Helarctos malayanus</i>
			nails	20	
			skin piece	1	
Small Indian Civet <i>Viverricula indica</i>	Normally Protected		skin	1	
Civet			carcass	2	possibly Common Palm Civet <i>Paradoxurus hermaphroditus</i>
Spotted Linsang <i>Prionodon pardicolor</i>	Completely protected		skin	1	
Mongoose <i>Herpestes</i> spp.			skins	2	
			stuffed	1	
			tails	10	including as key chain holders
Clouded Leopard <i>Neofelis nebulosa</i>	Completely protected	VU	skull	3	
			skin piece	1	
Leopard <i>Panthera pardus</i>	Completely protected	VU	skin	2	both appeared fresh
			skull	3	
Tiger <i>P. tigris</i>	Completely protected	EN	skin	1	
Leopard/Tiger <i>Panthera</i> spp.	Completely protected	VU/EN	canines	8	
Large cat	Completely protected		skull	3	in fragments
Small cat			carcass	1	possibly Leopard Cat <i>Prionailurus bengalensis</i>
			skull	10	
Asian Elephant <i>Elephas maximus</i>	Completely protected	EN	skin pieces	21	
			soles of feet	5	all in different shops
			tail	1	
			hair rings	25	
			molars	28	11 whole, 17 partial
			ivory	4	1 tip, 3 small pieces
Wild pig <i>Sus scrofa</i>			skull	4	
			teeth	20	
Sambar Deer <i>Cervus unicolor</i>	Normally Protected	VU	skull+antlers	5	
			antler set	2	
			carcass	1	partial
			legs	3	Fresh, for meat
			feet	5	soaked in oil
Muntjak <i>Muntiacus</i> spp.	Seasonally protected		skull+antlers	5	plates: partial skull and antlers
			skull	6	
			antlers	15	
			leg?	1	ID uncertain
Serow <i>Capricornis</i> spp.	Completely protected	NT	head	8	
			skull+horns	18	
			horns	30	
			legs	5	
Tree shrew <i>Tupaia</i> spp.			skin	2	
			tail	5	
Squirrel <i>Tamias</i> spp.			skin	20	
			tail	65	including as key chain holders
Asiatic brush-tailed Porcupine <i>Atherurus macrourus</i>			carcass	1	
Malayan Porcupine <i>Hystrix brachyuran</i>			skinned head	1	
			quill bundles	30	
Eagle <i>Clanga</i> spp.	Normally Protected		carcass	1	
Kalij Pheasant <i>Lophura leucomelanos</i>	Completely protected		feathers	30	two bundles in two shops
Burmese Python <i>Python bivittatus</i>	Normally Protected		skin/skin pieces	4/6	
Reticulated Python					
<i>Malayopython reticulatus</i>	Normally Protected		skin/skin pieces	4/4	
Python <i>Python</i> spp.	Normally Protected		carcass	6	
Giant Centipede			whole	20	possibly <i>Ethmostigmus rubripes</i>

**Table 1. Species and body parts recorded in Kyauktiyo market, Myanmar, January 2017.** IUCN status is that for 2016. NT=Near Threatened, VU=Vulnerable, EN=Endangered, CR=Critically Endangered. For protection status categories, see page 83.

*Protection of Wildlife and Conservation of Natural Areas Law* of 1994 (No. 6/94). It is generally recognized that this law is relatively weak and at the time of going to press, revisions and amendments to this law are awaiting parliamentary approval. In the current version, it is illegal to kill, possess, or trade in protected species, but an exemption is made for the possession, use, sale, transport or transfer of a “drug” prepared from a part of a protected wildlife species. This loophole means that under this law it may not be illegal for the vendors at Kyaiktiyo to sell wildlife products that have been prepared or processed from protected wildlife into “drugs” (i.e. medicinal oils), although possession and sale of the raw or unprocessed wildlife parts needed to produce these drugs is illegal.

The *Protection of Wildlife and Conservation of Natural Areas Law* states that the Director General shall determine which species of wild animals will be placed in the following protection categories: completely, normally or seasonally protected. These species are protected from harm, possession, use, sale, transport or transfer—except in the form of a “drug”. Currently, the law stipulates that anyone who is convicted of harming (killing, hunting, wounding), possessing, selling, transporting or transferring any “normally or seasonally protected” wild animal without permission is subject to a maximum prison term of five years and/or a fine of up to MMK30 000 (USD22). Meanwhile, anyone convicted of the same acts on a “completely protected” animal, as well as the act of exportation without permission, is subject to a maximum prison term of seven years and/or a fine of up to MMK50 000 (USD37). Although the monetary punishment is weak, particularly given that the value of certain types of wildlife can be very high (e.g. wild bear bile in Myanmar averages USD298/100 g; Nijman *et al.*, 2017), the possible length of imprisonment should act as a deterrent, if enforced. However, the authors document here the ongoing sale of protected wildlife at this location since at least 1996, indicating a systematic lack of enforcement.



**Red Junglefowl, Sambar Deer and (northern) Red Muntjac for sale at a foodstall located on top of Mount Kyaiktiyo, Myanmar, December 2015.**

Although the loophole in the *Protection of Wildlife and Conservation of Natural Areas Law* means that the sale of “drugs” made from protected wildlife is permitted, under the *Traditional Drug Law* (No. 7/96), it is illegal to manufacture or sell unregistered traditional drugs. However, it is legal to manufacture *registered* traditional drugs—but only if the manufacturer obtains a licence. Thus, shops at Kyaiktiyo manufacturing and/or selling traditional drugs made from protected wildlife would only be doing so legally under both laws if they are a) registered as a manufacturer; b) manufacturing only registered drugs and c) selling only registered drugs. No manufacturing licences were observed by the author during either visit to Golden Rock at the 17 shops offering traditional oils. The acts of manufacturing and selling unregistered traditional drugs and manufacturing a registered traditional drug without a licence are all subject to a prison term of up to three years and/or a fine of up to MMK30 000 (USD22). Much like the *Protection of Wildlife and Conservation of Natural Areas Law*, the *Traditional Drug Law* carries a weak monetary punishment, but a reasonable imprisonment term. Both laws suffer from a lack of enforcement.

## CONCLUSIONS

The number of globally threatened species that have been recorded at Kyaiktiyo is substantial. Combining data collected in 2017, 2015, 2006, 2000 and 1996 (Table 2), at least 12 threatened species have been recorded, representing a minimum of 224 individuals. Almost half of these were serows and eight were Asiatic Black Bears. For these two species especially, trade at Kyaiktiyo may represent a serious threat. Additionally, the number of nationally protected species recorded here is alarming. The most recent survey undertaken by the first author found products for sale from species completely protected under Myanmar law, including elephants, Leopards, pangolins and Sambar Deer *Cervus unicorn*.

The forested hills surrounding Golden Rock are included in the 156 km<sup>2</sup> Kyaiktiyo Wildlife Sanctuary, gazetted in 2001. Poaching is a serious threat and the five staff employed to patrol the area are not sufficient to safeguard the integrity of the sanctuary (Beffasi and Galanti, 2011). Shepherd (2001) reported that many of the species for sale at Kyaiktiyo were hunted in the surrounding forests, i.e. in the sanctuary. Thus, the sale of wildlife at Golden Rock may be having a detrimental impact on populations in the area.

Myanmar has the legislative instruments to shut down most, if not all, of the shops at Kyaiktiyo selling wildlife. The *Protection of Wildlife and Conservation of Natural Areas Law* and the *Traditional Medicine Drug Law* alone are enough to target buyers and sellers of raw wildlife products and unregistered traditional drugs. The Department of Traditional Medicine is tasked with supervising the manufacture of traditional medicines and should visit Golden Rock to see whether the shops have manufacturing licences. The Ministry of Health should

Species	1996	2000	2006	2015	2017	Total
Pangolin <i>Manis</i> spp.		3	0	0	1	4
Langur <i>Trachypithecus</i> spp.	1?	0	0	0	20	20
Gibbon <i>Hoolock</i> spp.		0	1	0	1	2
Asiatic Black Bear <i>Ursus thibetanus</i>	2?	8	6	2	13	29
Sun Bear <i>Helarctos malayanus</i>		0	1	0	0	1
Clouded Leopard <i>Neofelis nebulosa</i>		5	2	0	3	10
Leopard <i>Panthera pardus</i>		5	0	1	5	11
Tiger <i>Panthera tigris</i>	3	13	1	0	2?	17
Asian Elephant <i>Elephas maximus</i>		2	1	1	2	6
Sambar Deer <i>Cervus unicolor</i>		0	0	3	7	10
Serow <i>Capricornis</i> spp.		44	18	9	41	112
Irrawady Dolphin <i>Orcaella brevirostris</i>		2	0	0	0	2

**Table 2. Minimum number of individuals (whole animals or estimates from the number of body parts that were on offer) of globally threatened species observed in Kyaiktiyo market, Myanmar, in various years.** Data sources: January 1996 (Martin, 1997), April 2000 (Shepherd, 2001), February 2006 (C.R. Shepherd, in litt. 2017), June 2015 and January 2017 (present study).

determine whether the traditional drugs for sale at Golden Rock are indeed registered. The Pagoda Authority has the responsibility for registering and monitoring all economic activity conducted on pagoda property—including the pathways leading up to the Golden Rock on which many of these shops are located—and as such should alert the relevant authorities of potential illegal manufacturing and sale of wildlife when observed. Lastly, as it has previously been reported that many of the species for sale at Kyaiktiyo were hunted from the surrounding forests, i.e. the Kyaiktiyo Wildlife Sanctuary, greater efforts should be made to deter poaching. Protected wildlife continues to be offered for sale at Golden Rock and it is time for Myanmar to use existing tools to regulate this trade.

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