

# The Trade and Uses of Wildlife

## Products in Laos

*Esmond Bradley Martin*

Laos is one of the poorest nations in the world, with a per capita income under US\$200 a year; 85% of the population earn their living from agriculture. The inhabitants rely extensively on wild birds, fish, insects, frogs and other game meat for food. There are few exports except for hydro-electric power, timber<sup>1</sup> and opium.

Following the communist takeover in 1975, the Government confiscated many private businesses, closed down the principal market in the capital, Vientiane, and, in 1978, collectivized agriculture. From 1975 until June 1985, over 300 000 people fled to Thailand, including almost all skilled artisans and professionals (Stuart-Fox, 1986). The currency became very weak, falling from 15 kip to the US dollar in 1978/79, to 424 kip at the end of 1985 (Bourdet, 1989). By the mid-1980s, in an attempt to stimulate the economy, the Government initiated the New Economic Mechanism, which aimed to decentralise economic decision-making, encourage private business, liberalize the import and export trade and establish a single, unified exchange rate for the kip. By the end of 1988, the bank rate for the kip was close to its true value, and the main markets selling goods in Vientiane were flourishing (Anon., 1988; Anon., 1989 and Bourdet, 1989).

In February and March 1990, under the auspices of WWF-International and IUCN-the World Conservation Union, the author carried out a survey of the wildlife products for retail sale in and around Vientiane.

### INTRODUCTION

Laos is approximately the size of the UK but has a population of only four million people. The northern region is mountainous and is inhabited by a large number of hill-tribes. Besides practising shifting cultivation of rice, maize and vegetables, the people grow opium as a cash crop, hunt and gather produce in the forest, and engage in handicrafts, including the carving of ivory. Laotians have been hunters for generations, using - in addition to guns - nets, cross-bows, snares, bird calls, traps and hunting dogs.

In the southern part of the country there is more arable farming, mainly of rice. Today in some southern provinces such as Attapeu and Sekong, there is still a lot of wildlife to be found although in other areas, in particular major urban centres, wild mammals and birds have been largely extirpated.

<sup>1</sup>On 28 August 1991, the Laos Government banned all logging with immediate effect, whilst a forest survey is completed and forest protection measures are strengthened (Anon., 1991).

Product		US\$ per specimen
Civet	Viverridae spp.	8
Barking Deer	<i>Muntiacus muntjac</i>	5 per kg
Mouse Deer	<i>Tragulus napu versicolor</i>	4
Pangolin	<i>Manis javanica</i>	4
Pea Hen	<i>Pavo cristatus</i>	4
Snake	<i>Serpentes spp.</i>	4
Red Junglefowl	<i>Gallus gallus</i>	3.5
Hare	<i>Lepus siamensis</i>	3
Wild Boar	<i>Sus scrofa</i>	3 per kg
Lesser Tree Duck	<i>Oendrocygna javanica</i>	2
Tortoise	Testudinidae spp.	2
Squirrel	Sciuridae spp.	1
Owl	Strigidae spp.	0.80
Thick-billed Pigeon	<i>Trenon curvirastra</i>	0.70
Rat	<i>Rattus spp.</i>	0.70

Table 1. Animals commonly consumed for food which were offered for retail sale in Vientiane, February/March 1990. Survey by the author

### WILDLIFE CONSUMED AS FOOD

By far the largest number of animals killed in Laos are killed for food. Apart from rice and other products gathered in the forests, 80% to 90% of food consumed in the north of the country is from wild animals, according to recent surveys; the mountain peoples earn 30% to 60% of their income by supplying products from hunting and gathering to various markets in Laos (Chazée, pers. comm.).

Both modern and home-made weapons are widespread, with most families possessing a gun (Chazée, 1990). Such a proliferation of firearms, together with other weapons, has meant that a large number of animals are killed for local consumption or for trade with China, Thailand and Viet Nam. Many ethnic groups of northern



Laotian women selling wild-caught birds, Morning Market, Vientiane.

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Saleswoman in the Evening Market, Vientiane, displaying a dead Red Junglefowl, squirrel and rat, to be purchased as food.

Laos have continued to have strong trade relations with people in southern China: on the Laotian/Chinese border there is an active commerce in deer antlers, birds' bills, elephant ivory, tiger bones, pangolin scales and a variety of other wildlife products in exchange for Chinese goods such as bicycles, saucepans, lamps and padlocks.

The main area where wild game meat is sold in Vientiane is the Evening Market. Many animals are shot or trapped around the capital and in Bolikhamxai province to the east and brought to Vientiane by truck. A Government regulation, introduced in 1989, requiring taxes to be paid on many game carcasses has led to the development of a clandestine market in which game meat is supplied directly to restaurants so as to evade the police inspections of the Evening Market. In 1988, it was common to see Indian Muntjak *Muntiacus muntjak*, pangolin *Manis* spp., palm civet, Sambar *Cervus unicolor*, Wild Boar *Sus scrofa*, Porcupine *Hystrix brachyura* and Sun Bear *Helarctos malayanus*\* for sale in the markets of Vientiane, but these are rarely seen on public view today (Chazée, pers. comm.). The new Government regulation was meant to discourage the illegal killing of large mammals, but enforcement has not been effective.

A combination of unregulated hunting and habitat loss has probably led to a decline of populations of a number of the species in Laos which are listed in the IUCN Red

List. Species currently listed as Endangered, Vulnerable or Threatened and which occur, or probably occur, in Laos are: Pygmy Loris *Nycticebus pygmaeus*\*, Douc Langur *Pygathrix nemaeus*\*, Black Gibbon *Hylobates concolor*\*, Pileated Gibbon *Hylobates pileatus*\*, Dhole *Cuon alpinus*, Clouded Leopard *Neofelis nebulosa*\*, Tiger *Panthera tigris*\*, Asian Elephant *Elephas maximus*\*, Malayan Tapir *Tapirus indicus*\*, Javan Rhinoceros *Rhinoceros sondaicus*\*, Thamin *Cervus eldi*\*, Gaur *Bos gaurus*\*, Banteng *Bos javanicus*, Kouprey *Bos sauveli*\*, wild Water Buffalo *Bubalus arnee*, White-winged Wood Duck *Cairina scutulata*\*, Green Peafowl *Pavomuticus*\*\* and Siamese Crocodile *Crocodylus siamensis*\* (Salter, pers. comm.; Anon., 1990).

Some animals are captured for sale as pets, but this is not as common as in Thailand, where keeping certain animals in captivity confers status on the owner. In addition, some mammals - the Slow Loris *Nycticebus coucang*\*\*, Sun Bear and gibbon *Hylobates* spp.\* - birds and snakes, are exported illicitly to Thailand (Chazée, pers. comm.).

#### WILDLIFE PRODUCTS AS ORNAMENTS AND SOUVENIRS

Products from some of the above-listed animals were seen on sale in markets, jewellery and souvenir shops; in particular, rhinoceros, elephant, tiger, Serow *Capricornis sumatraensis*\*, Clouded Leopard, Gaur, Sun Bear, wild Water Buffalo and Thamin were openly displayed. Articles most commonly on sale, however, were those derived from elephant ivory.

Like most countries in Asia, Laos has an ivory carving industry. During the latter part of the 1970s and until 1988, the industry was in the doldrums because of the poor state of the country's economy and the lack of wealthy

Product		US\$
Water Buffalo horn attached to skull	<i>Bubalus bubalis</i>	200
Thamin antlers (pair)	<i>Cervus eldi</i>	195
Wild cats (various species) stuffed	Felidae spp.	100
Serow Deer antlers (pair) mounted	<i>Capricornis sumatraensis</i>	98
Sambar Deer antlers	<i>Cervus unicolor</i>	50
Civet skin	Viveridae spp.	40
Stuffed otter	Mustellidae spp.	39
Elephant ivory	<i>Elephas maximus</i>	
bracelet/Buddha pendant (4cm)		35/8
various antique ivory items		-
Python skin	<i>Python</i> spp.	22
Hornbill head	Bucerotidae spp.	20
Tiger nail/tooth	<i>Panthera tigris</i>	10/10
Gaur horn	<i>Bos gaurus</i>	8
Boar tooth	<i>Sus scrofa</i>	5

Table 2. Ornaments and souvenirs of animal products offered for retail sale in Vientiane, February/March 1990.

Survey by the author

\*listed in CITES Appendix I \*\* listed in CITES Appendix II

foreign visitors. With the arrival, from mid-1988, of western tourists and many Thai businessmen, the ivory business has picked up.

Almost all ivory for the ivory carving industry comes from the Asian Elephant populations occurring in southern Laos. There are perhaps between 3000 and 5000 wild elephants and 850 domesticated elephants (Chazée, pers. comm). There is evidence that some elephants are being illegally killed for their ivory; for example, in January 1990, 12 men were caught shooting elephants in the southern province of Attapeu.

From 1988 to February 1990, the wholesale price of good quality raw ivory doubled in Vientiane to around US\$200 a kg because of increased demand from foreign buyers, especially Thais. There are not many ivory craftsmen. Some 10 are based in Vientiane and a few are to be found in Luang Prabang, the former capital of Laos, 175 km north of Vientiane. Most carvers work in other substances, such as wood, because there is not enough ivory to keep them fully occupied. The Government-owned State Enterprise of Cultural Production, formerly one of the major ivory carving establishments in Vientiane, was unable to purchase raw ivory in 1989. The assistant manager claimed that before 1975, there was a brisk ivory business in the country and that, at that time, most of the raw ivory came from Laos, although a small amount was from Thailand and Myanmar.

Today, ivory carvers in Vientiane work mostly at home; the great majority of ivory tusks worked weigh less than 10 kg. This may explain why pendants and other jewellery is the carvers' main output. The most common item on sale is an ivory Buddha pendant, which is four cm long and retails for US\$8. An experienced craftsman can make up to five of these in one day and receives US\$4 for each. Only hand tools are used, never electrically-powered dentist drills as seen in Hong Kong, for example. Besides the ubiquitous Buddha pendant, Laos carvers make bangles, rings, bracelets and the occasional sculpture.

In early 1990, at least eight (mostly jewellery) shops in the capital and 12 in Luang Prabang offered ivory items for sale (Chazée, pers. comm.). Almost all ivory items are bought by foreigners, although, according to a long-term French resident of Laos, some wealthy Laotians display whole tusks in their houses. The quality of workmanship has declined since the revolution; it now compares with that done by Thais, but is very inferior to Chinese or Japanese carving.

After ivory products, the next most common wildlife ornaments for sale in Vientiane are the antlers from various deer; these are mounted on wooden plaques. Snake skins and cat skins can also be seen in souvenir shops, but the quality of tanning is poor, which greatly limits sales. However, a few cat skins are bought by foreign tourists and residents. The author was told that tiger skins were sometimes available but cured so poorly that the hair falls out; none was seen for sale. The Laotian hunter receives between US\$150 to US\$200 for a tiger skin, and the buyers are principally Thai.

Antique wildlife products for sale in Vientiane are

mostly made of elephant ivory or elephant bone and it is difficult to ascertain their origin. Probably most of the elephant bone smoking pipes seen for sale were made in neighbouring Viet Nam as were some of the ivory bangles. Viet Nam has an ivory carving industry larger than the one in Laos.

#### ANIMAL PRODUCTS AS MEDICINE

Compared with Chinese medicine shops in neighbouring Thailand, traditional pharmacies in Vientiane have few wildlife products for sale. In fact, there are now only two Chinese-style medicine shops in business and, in early 1990, only one of these had any wildlife products. It offered elephant hide, tiger bone, bat skeletons and Saiga Antelope *Saiga tatarica* horns (a substitute for rhino horn). Most of the people in Vientiane are too poor to buy expensive animal-based medicinal products, and most of the wealthy Chinese residents fled after the 1975 communist revolution. The Laotian markets do, however, contain numerous stalls which offer the cheaper wildlife-based medicines and remedies.

According to Dr Bounhoong Southavong, the Director of the Research Institute of Medicinal Plants, a subsidiary of the Ministry of Health, traditional Laotian medicine is used by at least 60% of the people in Laos. He pointed out that although Laotian medical practice differs from Chinese methods - Laotian doctors do not examine the pulse - the use of many wildlife products is similar. For instance, in both cultures two of the more common aphrodisiacs are sea-horses Syngnathidae and geckos Gekkonidae. Wild animal products are extensively consumed in Laos for medicines when they are available but use of herbs, owing to their easier accessibility and lower prices, is far more common.

In Vientiane more than 30 different wildlife products on sale as medicines were examined during the survey. By far the most valuable was rhino horn; the demand for it from wealthy Chinese throughout eastern Asia makes it too expensive for most Laotians, however.

In most countries in eastern Asia, rhino horn is marketed in pharmacies; in Yemen and Saudi Arabia it is sold at dagger stalls and, in common with the west, in antique shops. In Laos, however, rhino horn is sold in jewellery shops, even though it is usually purchased for medicinal use. It is likely that only these shopkeepers have sufficient capital to purchase the horn. The traditional medicine shops (both Chinese and Laotian) in Vientiane had no rhino horn at the time of the survey because, the owners said, they do not have the expertise to identify authentic rhino horn; the author also believes that they did not have the economic reserves to wait for its eventual sale.

Rhino horn has only come onto the retail market in Laos in some quantity since the latter part of 1988, when the Government implemented its new economic policies. With the upsurge of business, Thai businessmen started visiting the country. For the first time since 1975 it was therefore financially worthwhile for the owners of rhino horns to sell them to the jewellery shops because the

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Product		Use/Cure	Price in US\$
Tiger (bones)	<i>Panthera tigris</i>	rheumatism	370 per kg
(nose)		dog bites/sedative for madness	78 each
(claws)		sedative, especially for madness	23 each
(tooth)		dog bites/fever	14 each
Bat (skeleton)	Chiroptera	kidney stones	370 per kg
Elephant (trunk)	<i>Elephas maximus</i>	aphrodisiac/tonic	156 for end of trunk
(skin)		kidney stones/respiratory problems	
Serow Deer (antlers)	<i>Capricornis sumatraensis</i>	heart disease (skin disease Chinese use)	110 per kg
(bladder, tongue and stomach)		rheumatism/swollen throat	83 per kg
(tongue)		weak heart	78 for all three
(foot)		broken bones	78 each
(blood)		back pain	39 each
Clouded Leopard (jaw)	<i>Neofelis nebulosa</i>	rheumatism/tonic	4 for small bottle
Asiatic Jackal (nose)	<i>Canis aureus</i>	dog bites/sedative for madness	78 each
Sambar Deer (antler)	<i>Cervus unicolor</i>	sedative, especially for madness	55 each
Cat (teeth)	Felidae spp.	antiseptic	39 for 30 cm
(nails)		dog bites/sedative for madness	27 each
Raptor (claw)	Falconiformes spp.	sedative, especially for madness	?
Wild Boar (tusk)	<i>Sus scrofa</i>	swollen throat	23 each
Bear (skin)	Ursidae spp.	lung disease	20 each
(bile)		rheumatism/tonic	20 for 20 cm <sup>2</sup> (a bottle (mixed with
Gaur (bile)	<i>Bos gaurus</i>	liver disease	16 for 20 cm <sup>2</sup> (honey) of 750 ml
(horn)		swollen throat	16 for 750 ml bottle
Barking Deer (foot)	<i>Muntiacus muntjac</i>	ear disease	12 per kg
Langur Monkey (internal organs)	<i>Pygathrix nemaeus</i>	lung/intestine diseases	12 each
Python (bladder)	<i>Fython spp.</i>	urinary problems	3
Red Junglefowl (claw)	<i>Gallus gallus</i>	swollen throat	2 each
Pangolin (claw)	Manidae spp.	toothache	1 each
(scale)		toothache	0.42 each
Porcupine (quill)	Hystriidae spp.	swollen throat	0.07 each
			0.04 each

Table 3. Animal products used for medicine and offered for retail sale in Vientiane, February/March 1990. Survey by the author

money they received had some value and many consumer goods (mostly from Thailand) were now available in the shops.

Mystery and controversy surround the age of the horns now being offered for sale and the question of whether rhinos still survive in Laos. Wildlife traders in Thailand present evidence suggesting that there were rhinos in Laos in the 1960s and 1970s. They claim that during this period they purchased relatively large quantities of rhino horn which originated in Laos. The main wholesaler and retailer of rhino products in Bangkok told the author that he had purchased many horns from Laos between 1965 and 1975. However, some of these were antiques carved into the shape of a Buddha.

According to Jean Deuve, a French biologist who worked in Laos in the 1960s, Sumatran Rhinos *Dicerorhinus sumatrensis* were probably present in the country at that time; he had very little information on the presence of Javan Rhinos (Deuve, 1962). In 1983, Jeffrey Sayer of IUCN-The World Conservation Union, visited the country as a consultant to the Food and Agricultural Organisation, and concluded that "rhinos certainly occurred in Laos until the fairly recent past, and there are strong indications that they still do so". He was told of a sighting in May 1983, about 50 km north of Vientiane, and of the display of horns in many villages in Saravane and Attapeu provinces along the Vietnamese border (Sayer, 1983). More recently, the Lao/Swedish Forest

Resources Conservation Project obtained information of the presence of a rhino, also about 50 km north of Vientiane, in February 1988, and of two rhinos on the border of Xiang Khouang and Bolikhamxai provinces in early 1990 (Salter, 1990a).

In late 1988, a few rhino horn pieces were seen for sale in the Morning Market in Vientiane. By early 1989, there had been an apparent increase in availability, as 75 to 100 rhino horn pieces were seen during a single visit to the same location. At the same time three rhino horn pieces were seen in jewellery shops in Pakse, the largest city in southern Laos (Salter, 1990b). In the same year Chazée viewed three rhino horns in Luang Prabang. Furthermore, the former Director of Wildlife and Fisheries (1984-1988), Pengkeo Singsourya, believes that there are still a few rhinos in Laos and that perhaps both Sumatran and Javan species are still in existence (Pengkeo Singsourya, pers. comm.). Another piece of evidence that there may still be rhinos in Laos comes from the major seller of Laotian animal products in the Morning Market in Vientiane: she claims that, in January 1990, she received US\$13 for a very small quantity of rhino blood. She obtained her supply from local Chinese and sold it to Laotians suffering from respiratory problems and to women having difficulties in expelling afterbirth.

At the time of the survey, there were four jewellery shops, all in the Morning Market, selling rhino horn. The owners obtained their supplies, both antique and new,

from villagers and people in Vientiane. They paid for them in kip, Thai baht or US dollars - currencies which are freely traded in Vientiane. At least two of the pieces were antiques, one of which was carved in the shape of a Buddha with details highlighted in gold paint. It had been made either in Laos or Cambodia, where traditionally this type of craftsmanship is found.

After having examined the eight horns offered for retail sale in Vientiane, the author believes that most of them were not fresh; some of the other horns, however, may have come from recently-killed animals. The majority of the horns seen were from the Sumatran species, but two shaped like horn from the Javan Rhino were seen.

The main buyers of rhino horns in Vientiane are Chinese from Thailand who either consume them for medicinal purposes or re-sell them to Chinese pharmacies in Bangkok. A jewellery shop owner told the author that one of his customers had sent the horn he bought to Hong Kong for sale, as the price was high there. However, Bangkok is the main market for rhino horn in this part of Asia. Horns from Myanmar, Laos and Cambodia usually find their way to Bangkok where the large and wealthy Chinese community buys them to use as fever-reducing medicine. In Vientiane, in early 1990, the average retail price for horn from Asian rhinos was US\$16 594 a kg. In Bangkok, at the same time, the average price for Sumatran and Indian horn was US\$21 354 a kg - about 30% higher than in Vientiane. Jewellery shop proprietors in Laos are well aware that most of their horn ends up in Bangkok. Fake rhino horn carved from wood and bone can also be seen in many of the jewellery shops in Vientiane, but most of them do not look or feel like the genuine article. In Bangkok, 46% of the pharmacies surveyed in February 1990 had rhino hide for sale, but not a single shop in Vientiane offered any. In Bangkok one can, in addition, purchase rhino penises, dried blood and toenails, but, in Vientiane, the only other product aside from the horn was one nail which was being offered for the equivalent of US\$1800 a kg.

A number of other wild animal products for medicinal use are also so highly priced that they are rarely consumed locally but instead are purchased for export. The major one is tiger bone. Small pieces are bought locally (US\$370 a kg retail) to cure rheumatism. Other tiger

Weight	Probable origin	Species	US\$/kg
42g	Laos	Javan?	23 810
70g	Laos	Javan?	17 143
75.2g	Laos	Sumatran	15 957
71g	Laos	Sumatran	15 735
99g	Laos or Cambodian (old Buddha carving)	Sumatran	15 625
26g	Laos	?	15 385
62.5g	?	Sumatran	12 500
?	Laos	?	?
Average retail price per kg			US\$ 16 594

Table 4. Rhinoceros horn for retail sale in Vientiane, February/March 1990. Survey by the author

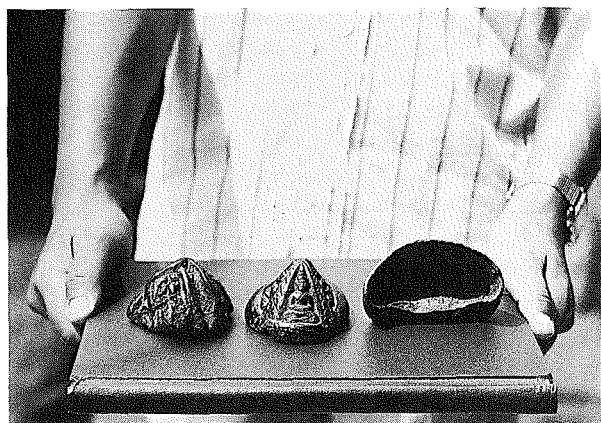
products on sale include noses, teeth and claws, which can all be used for medicinal purposes, although occasionally they are bought as ornaments. In 1989, traders bought bones from Laotian hunters at an average of US\$90 a kg for those from animals with a carcass dried-bone weight of 11 kg and US\$60 a kg for smaller tigers which yielded six to seven kg of bone. However, at the Chinese border a poacher could receive from US\$170 to US\$250 a kg, depending on the size of the bone (Chazée, pers. comm.).

#### CONCLUSIONS

The effect of exploitation of Laotian wildlife is unknown, but several species are probably threatened with or near extinction as a result of hunting pressure, trade, and habitat loss. Those likely to be most affected by the souvenir and medicinal trade, according to available evidence, are the rhino (both Javan and Sumatran), Asian Elephant, Tiger, Clouded Leopard and, perhaps, Gaur and Banteng. Other species, such as the Siamese Crocodile and Kouprey, are certainly very rare in Laos, but little is known about their status or about the causes of their apparent population declines.

The Laotian Government recognizes the need to control trade as being one component of wildlife management. Attempts in the latter half of the 1980s to control wildlife trade and hunting by Government decrees proved ineffective as there was no enforcement mechanism and no specified penalties for violations. However, in 1989 penalties for violations of hunting and trade regulations were specified in the Penal Code (1989). In 1990, the Lao/Swedish Forest Resources Conservation Project made recommendations which are presently before the Laotian Government and which lay out a workable system of regulating wildlife resources (Madar and Salter, 1990).

◀ Buddha figure carved in Laos or Cambodia from Asian rhino horn (middle); rhino horn (left) and a rhino nail (right of picture), Morning Market, Vientiane.



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These include a suggestion for Laos to accede to CITES, but this would require upgrading of the enforcement and control capabilities of the Wildlife and Fisheries Conservation Division, the responsible section of the Department of Forestry and Environment.

#### RECOMMENDATIONS

To prevent the possible elimination of, or sharp decline in the numbers of certain wildlife species as a result of excessive hunting and trade, the Laotian Government should consider implementing the following three general policies. Firstly, comprehensive wildlife regulations need to be enacted with effective enforcement capabilities and with strong penalties for people who over-exploit and/or sell endangered wildlife species and their derivatives. Secondly, Forestry and Customs officials need to be trained to identify wildlife and wildlife commodities and to implement the new laws prohibiting the killing of and trading in certain species. And finally, a monitoring system needs to be set up to examine regularly the sale of wildlife products throughout Laos. If these recommendations are implemented by the Government, then there is a reasonable future for the rich and diverse wildlife of Laos.

#### ACKNOWLEDGEMENTS

I am most grateful to WWF-International for the financial support which enabled me to work in Laos. Laurent Chazée and Rick Salter read my manuscript and made many useful comments; they also helped me greatly in Laos, providing transport and interpreters, and shared with me their great wealth of knowledge on the country's wildlife. Other people who assisted me with my research include Pengkeo Singsourya, Somvath Soulivong and Bounhoong Southavong, whom I also thank.

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