

# WATER SNAKE TRADE

Water snake trade around the Tonle Sap Lake has escalated to a phenomenal scale. Monitoring programs carried out over the last two years have shown that upwards of four million snakes are hunted annually, making this the largest exploitation of any snake community in the world.

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There are a number of different markets for the snakes of Tonle Sap Lake. The most significant is a local trade where snakes are used as animal feed to supply the numerous crocodile farms in and around the lake. Massive growth in the crocodile farm industry in Cambodia has taken place over the last twenty years (Jelden et al. 2005), placing enormous pressure on the lake's resources. While fish is still the major resource available, trade in the other wildlife of the lake, particularly snakes, has increased dramatically. In times of fish scarcity fishers living on the lake change their strategy to 'fish' water snakes from the lake using gill nets. Eight species are caught fairly regularly, of which five belong to the sub-family Homalopsinae, the Southeast Asian group of water snakes. This has resulted in a high availability of water snakes in local markets that in turn has caused a rise in human consumption of the snakes, and large quantities are now being transported from Tonle Sap Lake to urban centres around Cambodia. They have become a popular snack



▲ Snakes being traded in Kampong Chhnang in the South of the Tonle Sap Lake

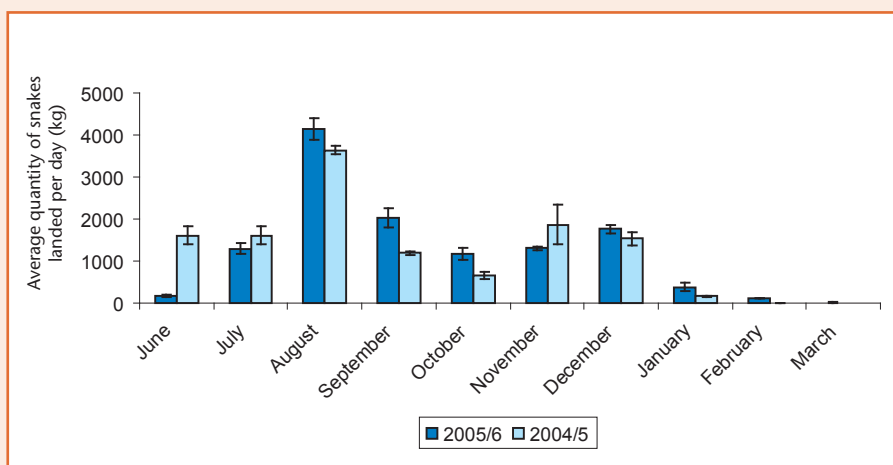
food, commonly served either fried or dried, and often accompanied with the local palm wine.

There are also international markets for the snakes of Tonle Sap (Bonheur & Lane 2002), both in the form of skins that are used for fashion products, as well as live animals that are used for human consumption, often in expensive restaurants. Although this is small in comparison to the local trade for crocodile food,

representing less than 5 % of the number of individuals being sold, the impact on these higher value species is significant. The species being targeted are primarily the Bocourt's water snake (*Enhydryis bocourti*) and the puff faced water snake (*Homalopsis buccata*) although pythons (*Python molurus*), and cobras (*Naja Kaouthia* and *N. siamensis*) are also traded occasionally.

Massive declines in the numbers of all species of snakes that are traded are being reported by both snake hunters and traders indicating that these activities are unsustainable and could lead to a loss of snake diversity and abundance within Tonle Sap. One of the species that is regularly caught, the Tonle Sap water snake (*Enhydryis longicauda*), is endemic to the Tonle Sap Lake and River (Saint Girons 1972) and therefore is of

**Table 1.** The seasonal nature of snake trade based on the quantity landed at Chong Khneas port, Siem Reap.



global interest and concern. Due to differences in the biology and value of the species involved some are fairing far worse than others. The Bocourt's water snake and the Puff-faced water snake occur both incidentally in the crocodile food trade and are targeted for the skin and live trade where large females are sought. Unfortunately, those are also the most important for the continuation of their populations. This combination of exploitative pressure appears to be having devastating consequences for these two species, which have been highlighted by local villagers as having declined the most out of all the water snake species. In particular the Bocourt's water snake, the most valuable for its meat and skin (Stuart et al. 2000), is now a rarity within the lake.

The people living on the lake in floating communities have become increasingly dependent upon the snakes as a source of income as a result of declining fish catches. Possibly tens of thousands of people are engaging in snake hunting and for many this is a crucial part of their seasonal livelihood strategies. Efforts to protect the snake populations therefore need to be sensitive to the needs of some of the poorest people in Cambodia. For certain months of the year, between June and September, the capture of snakes to supply the crocodile farm industry is a critical and reliable source of

▼ Snake meat drying ready to be packed and sold as a local snack food.



▲ A Captive Siamese crocodile feeding on the endemic Tonle Sap water snake (*Enhydris longicauda*).

income for these people. However the capture of large snakes for the skin and live trade is more opportunistic. Due to the increasing difficulty of finding these high value species as they become rarer, this activity is an unreliable and therefore less important source of income. The costs associated with this activity are however low, as it can be carried out concurrently with other fishing activities, and therefore while the price is high there is sufficient incentive for hunting to continue.

The snakes of Tonle Sap are a prominent part of the ecosystem, providing food for large water birds (Tingay & Nicoll 2006) and undoubtedly for other predatory species including the wild crocodile (Daltry et al. 2003). Along with much of the other wildlife of Tonle Sap, the snakes are associated with the forest habitat surrounding the lake. Their habitat is therefore under continuing threat from conversion to agricultural land and dry-season forest fires (Bonheur & Lane 2002) and the snakes themselves face additional pressure from illegal practices occurring in the floodplain such as stream and pond pumping and electro fishing. Protection of this unique and threatened community of snakes therefore requires a multi-faceted approach to tackle the range of threats they are facing. Protection of the inundated forest

and the prevention of illegal and destructive practices would secure their refuges, while harvests could be made more sustainable through measures such as closed hunting seasons to protect the breeding seasons of snakes, and further enforcement to prevent the capture and sale of the large individuals.

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