

**Notes on Mugger Crocodile *Crocodylus palustris* (Lesson, 1831) hunting on *Axis axis* in Bardia National Park, Nepal**

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**Abstract**

Mugger Crocodile *Crocodylus palustris* is a specialized voracious predator. Hunting strategy of the Mugger on the *Axis axis* deer and food storing for later use behavior of *Crocodylus palustris* is documented in Bardia National Park, Nepal. Understanding the diet of the Mugger is of great significance in Bardia National Park for its conservation and management.

**Key words:** *Crocodylus palustris*, feeding habits, food storing, Bardia National Park, Nepal.

Nepal is the home for two crocodylian species i.e. the Gharial *Gavialis gangeticus* and the Mugger *Crocodylus palustris*. Both the species are reported from Bardia National Park, Nepal. The studies on feeding ecology of the crocodylians in Nepal are rare. However, information on general status, population, distribution and habits of the crocodylians is available (Maskey; 1998, Khadka et.al; 2008, Khadka et.al. 2014). The Mugger is a semi-aquatic, keystone and top carnivore of slow flowing freshwater ecosystems, and is considered to perform a vital service in the aquatic ecosystem by distributing the nutrients throughout the water body resulting an increase in primary production and fish populations (Mulozoki 2000, Khadka et.al. 2014). Currently, the Mugger has been categorized as a Vulnerable species (IUCN, 2015) and has been distributed in Nepal, India, Bangladesh, Pakistan and Iran (Da Silva & Lenin, 2010). Here, I report the hunting strategy of the Mugger crocodile on a spotted deer (*Axis axis*) in Bardia National Park, Nepal.

While conducting Burmese python *Python bivittatus* survey, on 24<sup>th</sup> March, 2014 at 15:05 hr at Gulgulwa Ghat (N 28° 27' 58.3", E 81° 14' 37.8"), Bardia National Park, I noticed a herd of Spotted deer (*Axis axis*) drinking water in Khauraha stream (Figure 1).

Suddenly, an adult mugger crocodile (approx. 2.5 m length) grabbed left hind limb of a female sub-adult deer and dragged it into the water (Figure 2).

The deer tried to escape striking the Mugger with right hind limb but could not succeed. After a while, the Mugger took it into the deep pool and started encircling with the deer for five minutes. After that, the Mugger started surface leaping catching the leg of the deer (Figure 3 & 4).

Then, the deer appeared weak and all of sudden the Mugger took it underneath the water and disappeared. Surprisingly, after 15 minutes the Mugger re-appeared with the kill on the opposite side of the stream. Then, the

Mugger stored the kill under the roots of an uprooted tree *Ficus glomerata* (Figure 5). At 16:12 hr the mugger came outside the water for basking (Figure 6). I observed

the parts of the kill (head and fore limbs) next day at 12:25 hrs entangled on the same root and Mugger basking on the bank of the stream.



Figure 1. *Axis axis* drinking water in Khauraha stream



Figure 2. Mugger dragging *Axis axis* in the river

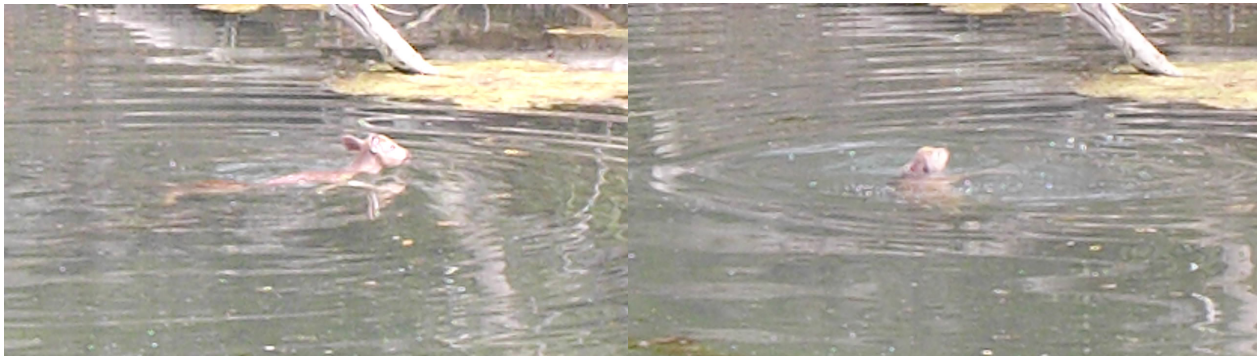


Figure 3 & 4: Mugger rotating the *Axis axis* before taking underneath



Figure 5: Mugger storing its kill under the roots of the tree *Ficus glomerata*



Figure 6: Mugger basking on the river bank after storing the kill

The mugger is an opportunistic predator and various species including human have been reported as diet elsewhere (Schleich & Kastle, 2002, Shah & Tiwari, 2004, Bhatnagar & Mahur, 2010, De Silva et.al, 2011), and a specialized predator hunting in and around water bodies. It is a medium sized crocodile and has the broadest snout of the genus *Crocodylus* (Da Silva & Lenin, 2010). Stomach contents of the Mugger include leopard, deer, monkeys, dogs, turtles, birds (Daniel, 2002). Food storing under submerged branches and

stones has been reported in Nile crocodile *Crocodylus niloticus* ([www.crocodilian.com](http://www.crocodilian.com)). In this observation, I observed the storing its kill under the roots of *Ficus glomerata*. Food storing behavior in the Muggers is common for the later use (Da Silva, 2015 pers.comm.). In this regard, this documentation would be useful to understand prey dynamics of mugger crocodile and propose management intervention to conserve this vulnerable species in Bardia National Park, Nepal.

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