

Project Update: April 2013



At Amchang Wildlife Sanctuary



Heretofaunal Assessment Work at Amchang Wildlife Sanctuary



Mapping at Amchang Wildlife Sanctuary with identification of important spots with high herpetofaunal activities



14 species of frogs, 8 species of lizards, 6 species of snakes and 1 species of turtle are so far recorded from Amchang Wildlife Sanctuary

At Garbhanga Reserve Forest



Heretofaunal Assessment Work at Garbhanga Reserve Forest

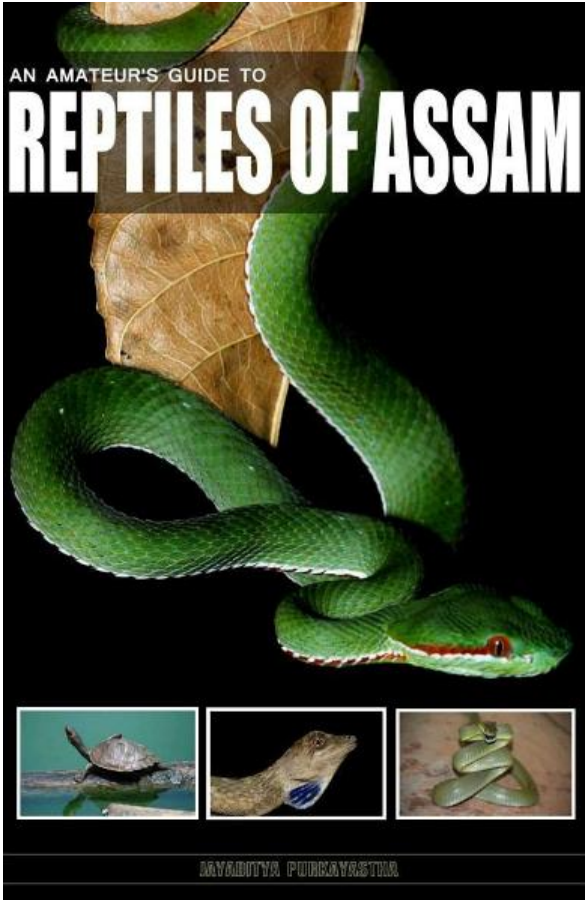


Mining activity inside Garbhanga Reserve Forest



12 species of frogs, 6 species of lizards and 9 species of snakes are so far recorded from Amchang Wildlife sanctuary

Book ready to be release in mid June



Supporting turtles in different temple ponds across the state.



- 1. Gorokhiya Gohair Than, Sorbhog;
- 2. Madhab Temple Pond, Hajo;
- 3. Kamakhya Temple Pond, Guwahati;
- 4. Ugratara Temple Pond, Tezpur;
- 5. Nagsankar Temple Pond, Nagaon;
- 6. Deopani Temple Pond, Diphu;
- 7. Atkheia Temple Pond, Golaghat;
- 8. Barokheia Temple Pond, Golaghat

Map showing temples with turtles in state of Assam, India

At Kamakhya Temple Pond



We conducted an in depth survey on Kamakhya temple pond in Guwahati Assam. The turtle species that were encountered in Kamakhya are *Nilssonia gangetica* (Cuvier, 1825); *Nilssonia hurum* (Gray, 1831); *Nilssonia nigricans* (Anderson, 1875); *Pangshura sylhetensis* (Jerdon, 1870); *Pangshura tecta* (Gray, 1831); *Pangshura tentoria* (Gray, 1834); *Geoclemys hamiltonii* (Gray, 1831). We, in our study, sighted as many as 45 turtles per visit on an average. Secondary data from the residents sets the figure to be around 250 individuals. *Nilssonia nigricans* and *Pangshura tentoria* were the most frequently sighted species during our survey. Physically, the pond water on first observation does not appear very clean mainly due to litter of non biodegradable materials such as plastics as well as bits of food articles offered by the devotees to the turtles in the pond. Owing to this the pond water emits a foul odour on closer observation. The colour of the pond water is muddy brown and it is often coated by a greenish algal layer. The surroundings, on the other hand, appear to be clean, although its perimeter was seen to be littered with papers, bread crumbs, plastics, wheat balls, banana peels, etc. which gives an unhealthy appearance to the pond. Adequate basking places for turtles, such as logs of wood, branches of trees, rock surfaces was found bordering the pond as well as on the water surface. The length of the pond was found to be 38 meters and breadth of 29m.

The average pH of the pond water at midpoint of the pond was 6.9 and that of at the end point is 6.8. The pond appeared to be less transparent on apparent observation. The average turbidity of the pond water showed the pond to be turbid or nil transparency at 44cm depth. The amount of BOD was 6mg/l indicating a certain degree of pollution in the sample. The average amount of dissolved oxygen in the water was 1.98mg/l on the first day and 1.10mg/l on the fifth day. The results indicated depletion in the dissolved oxygen content. There is a considerable difference in DO from Day 1 to Day 5 (0.88mg/l) which specify oxygen consumption by microbes etc. in the water sample thereby indicating pollution in the water of the pond. The turtle pond of Kamakhya is very significant in terms of its turtle fauna especially because it is one of the very few places where *Nilssonia nigricans* is housed. *Nilssonia nigricans* is under EW category of IUCN, which means that the turtle is extinct in the wild. This makes the conservation of this pond even more important and critical for the existence of this turtle species. The turtles present here do not constitute a natural population and are released by devotees of goddess Kamakhya to this pond. It is believed that when a child is born devotees donate turtles to this pond as a part of ritual to ensure that the new born attains a long life. This belief is rather helps conserve the turtles in the pond wherein people are even not allowed to bring the turtles out of the pond. The apparent threat faced by these turtles is the outcome of lack of awareness regarding turtle biology on the part of the devotees and the management committee (run by the priests of the temple). Food offered by devotee in many case are seen to be ones which is not the diet of the turtle. It thereby gets rotten and adds to the organic waste of the pond.

Many non biodegradable wastes such as plastic wrappers of food items, aluminum foil could be seen floating on the pond surface, which probably make their way through offerings of the devotees. The pond also shows a very high density of turtles in a very confined area. There are no proper breeding sites for the turtles.

At Ugratara Temple Pond



Breeding ground for turtles at Ugratara temple, Guwahati, Assam

The pond is situated at Uzanbazar of Guwahati. The perimeter of the pond the pond is concretized, leaving no space for the turtles to lay eggs.

Thus, sometimes the turtle move out of this pond to the nearby residential areas which may result in death of the turtle from road mortality or consumption. Luckier ones are again reverted back to the bond by the residents. Thus we provided a breeding spot for the turtles herein (12 sq m). For the work we selected a corner of the pond with least human interference. Boulders were used at the base with the edge made of bricks. We filled in riverine sand within it.

At Madhab Temple Pond

This pond is situated at Hajo. This pond is by far the most species rich.



We have recorded 12 species from the pond. Since this pond requires more attention and detail study, we have entrusted Mr. Pranab Malakar with the responsibility of regular information gathering on the turtle behaviour in the pond and to collect basic physicochemical parameters of the pond. Mr. Malakar is being paid a stipend per month for the entire length of the project (12 months).

Unfortunately during the whole survey period (15 survey days with a team of four members were invested in Deeporbeel and 4 survey days with four members were invested in Chandubi beel) we did not encounter a single turtle species. In both the wetlands, extensive fishing is done (more in Deeporbeel, with around 1200 families dependent on the wetland by means of fishing). Secondary data suggests that turtles are very rarely sighted in Deeporbeel (We can confirm just three sightings in year 2012) and if possible the sighted turtles are caught and consumed.

Publications:

1. Purkayastha, J., Hassan, M.A., Islam, H., Das, J., Sarma, M., Basumatary, M., Sarma, N., Chatterjee, N., Singha, S., Nair, V., Purkayastha, A., Dutta, J., Das, M. (2013): Turtles of the Temple Pond of Kamakhya, Assam, India. *Reptilerap* 15: 11-15
2. Purkayastha, J., Das, M., Vogel, G., Bhattacharjee, P.C., Sengupta, S. (2013): Comments on *Xenochrophis cerasogaster* (Cantor 1839) (Serpentes: Natricidae) with remarks on its natural history and distribution. *Hamadryad* 36(2): XX-XX. (To be published)
3. Borah, M.M., Bordoloi, S, Purkayastha, J., Das, M., Dubois, A., Ohler, A (2013) : *Limnonectes (Taylorana) medogensis* (Fel, Ye & HuaNg, 1997) from arunachal Pradesh (India), and on the

identity of some diminutive ranoid frogs (anura: dicroglossidae, occidozygidae) Herpetozoa 26 (1/2): XX-XX (To be published)

Media Coverage

1. http://articles.timesofindia.indiatimes.com/2013-03-1/guwahati/38162189_1_temple-pond-kamakhya-turtles
2. <http://www.sentinelassam.com/mainnews/story.php?sec=1&subsec=0&id=157242&dtP=2013-05-18&ppr=1>