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# Bringing freshwater turtles out of their shells and into the spotlight

8-11 minutes



*Roofed turtles basking in Orang National Park. Turtles are a crucial part of the aquatic food chain and cleaners of the rivers and ponds. Photo by Malaika Dsouza.*

## **Researching the underresearched – Leith’s and black softshells**

Dharwadkar and Mital, are independently involved in researching

two lesser-known turtles in India – Leith’s softshell and black softshell turtle.

Leith’s softshell turtle (*Nilssonina leithii*) is a large freshwater turtle found mainly in large rivers and is endemic to peninsular India. This turtle can grow upto 80 cm in length. The hatchlings (newly hatched turtles) and the juveniles have eye-like spots on its carapace (the upper part of the shell), which is a characteristic of all turtles in the genus *Nilssonina*. Many individuals have red and black patterns on their heads, which could be absent on some individuals. Detailed information about its natural history and ecology in India is hard to come by, however.

Dharwadkar’s current research is mainly about finding out viable populations of the Leith’s softshell turtle in Maharashtra to conduct further long-term research. “We are also looking into the threats that these turtles are facing in the habitats where they are found. This project is in a nascent stage and we are looking for more funding to conduct intensive surveys to map all the places where these turtles are found and monitor their population, and conduct education programs,” she said.

Her work with FTTI helped further her research on Leith’s which she calls “a very cool-looking turtle that needed all the love (and research, because there are hardly any studies on it).”





An adult Leith's softshell turtle endemic to peninsular India. Photo by Rahul Kulkarni.

Mital's turtle of choice is even more rare and mysterious – the black softshell turtle is one of two species of freshwater turtles and tortoise around the world that is officially “Extinct in the Wild” as listed by IUCN.

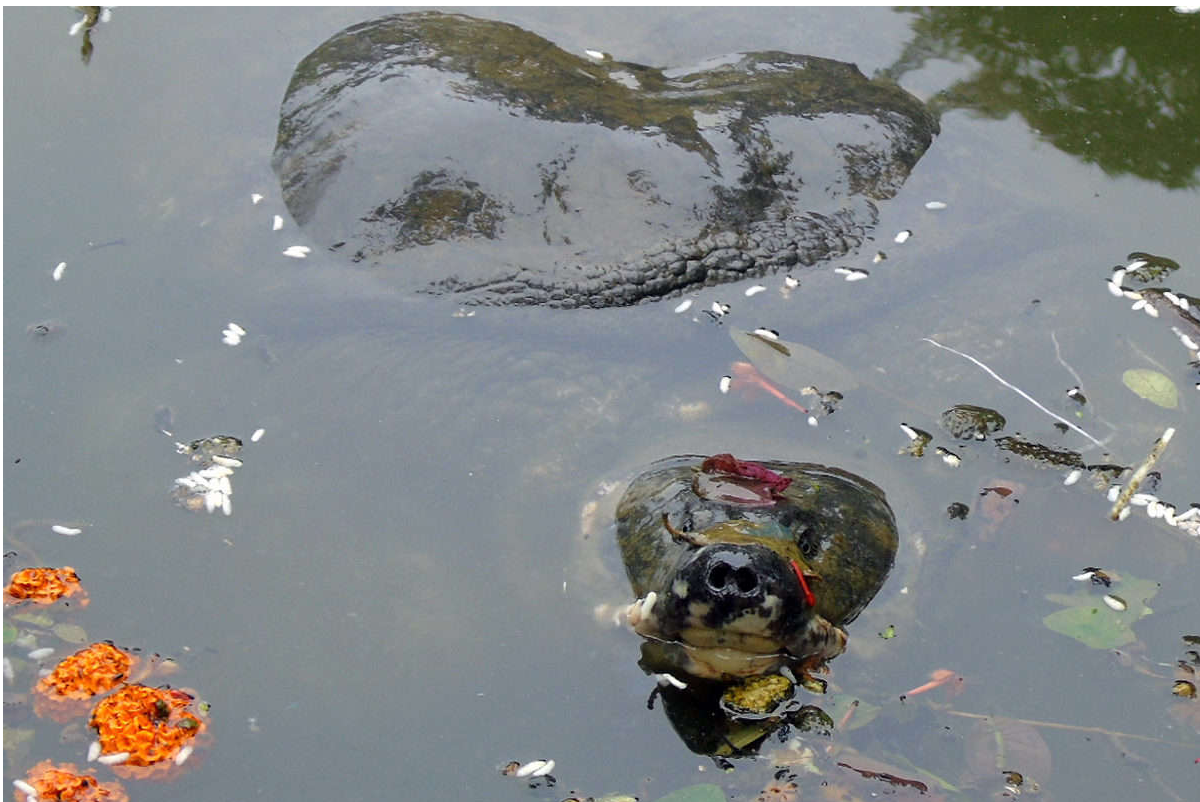
“However, a wild population of the species was rediscovered in the Brahmaputra River at Kaziranga and Nameri National Parks of Assam. Subsequent surveys have reported them from a handful of locations across northeast India,” she said. “Many protected areas which might hold wild breeding populations of this rare species are still neglected and yet to be surveyed. The fact that no dedicated research had been initiated on this incredibly rare and revered turtle of Assam since it was rediscovered in 2007, got me excited to spearhead a project that would attempt to initiate baseline research in the mighty Brahmaputra river landscape,” said the researcher, who has previously studied the ecology of freshwater turtles in the Ganga river basin.

The Black Softshell Turtle (*Nilssonia nigricans*) in India is primarily found in a number of temple ponds across Assam, West Bengal, Tripura, Nagaland. However, here, captive populations live in despicable conditions surviving on poor diets of puffed rice, fruits and fast food as offerings by pilgrims and tourists, said Mital. There

have been few records of individuals in the wild but further surveys are needed to identify populations in order to begin talking about conserving them.

“During my work, I’ve encountered forest staff and fishermen who have sighted the turtle and even have photo records. I’m working on building a network to consolidate these records and reach out to more people across my study areas,” she said.

Currently, the Black Softshell Conservation Project in Assam funded by the [Mohamed bin Zayed Species Conservation Fund](#) and [Desert Tortoise Council Diversity Grant](#), aims to survey four protected areas of Assam (Kaziranga, Orang, Manas and Nameri National Parks) along the Brahmaputra River and its tributaries for black softshell populations in order to update the conservation status of the species.



A rare black softshell turtle in a temple pond in Guwahati. Photo by Anuja Mital.

Read more about another FTTI member, Ayushi Jain's work with freshwater turtles: [Building community networks to save a rare turtle from extinction](#)

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## Women on the field

Dharwadkar was led to her research on the Leith's softshell turtle after a difficult time as a woman on the field in Uttar Pradesh. "I wanted to work on turtles in south India after a year and half of very unsafe and challenging fieldwork in the northern state of Uttar Pradesh. I have always loved softshell turtles and Leith's softshell turtle seemed like an ideal candidate as it was endemic to peninsular India and also quite under-researched," she said.

Researching turtles is particularly challenging for women as turtles are active in the day and night, notes Dharwadkar. "Field conditions are not conducive for women to work at night," she said, recalling her experiences in north India.

Mital, who also worked on the field in Uttar Pradesh, narrates similar experiences where her turtle research usually came along with worries about going out on the field alone, tackling drunk boatmen, finding the right field assistant and more. In Assam though, where her current research is ongoing, it is different, she said. "I can't still work at night but I don't feel like I'm treated any differently as a woman. I can move around alone, I can travel anywhere...the northeast in general is much safer," said Mital.

Despite their field experiences, perhaps common to many women wildlife scientists in India, the duo focus on the opportunities that being a woman researcher offers. Gaining trust from other women on the field has been fairly easier and locals are not outrightly

hostile when they are out for awareness and education programs.

Collaborating with researchers has been another benefit, said Mital, adding with a laugh, “Women tend to collaborate more! I’ve always got good responses when I’ve reached out to women turtle researchers,” she said.



Anuja Mital (L) and Sneha Dharwadkar (R), co-founders of Freshwater Turtles and Tortoises of India. Photo from Freshwater Turtles and Tortoises of India.

Another member of FTTI, Ayushi Jain, studying the Cantor’s softshell turtle in Kerala, echoes similar challenges as those faced by Dharwadkar and Mital about being a woman researcher on the field. She too has found a way to focus on the benefits, by building trust among local women and including diverse voices into her survey interviews.

“I get diversity in data because it is not that I am only talking to the fishermen or other male members of the community. I often go to homes near the river from 9 am to 3 pm. At that time, male members are not always there. Women collect in one place and talk to me. They are not wary of me,” she said.

Through her data collection, she has observed a gap in knowledge between two members of the same family – the man and the

woman and this knowledge gap between genders is something she feels she has been able to pick up as a woman researcher, talking to other women and even staying in their houses.

Dharwadkar too has been including voices of women during her field surveys, noting that, “Even though a lot of men go out for fishing, it is the women who cook turtles, so sometimes they have interesting biological information to add.”

For Dharwadkar, Mital and Jain there is a long way to go before field research is conducive for women but they agree that through their workshops and awareness programs, where they interact with many children, perhaps the future generation, especially the girls, will get inspired. “Representation is important,” said Dharwadkar, with hope.

Going forward, Mital and Dharwadkar want to make their own projects more inclusive and create safe spaces where women researchers can at least come together and talk about these issues.

For the moment though, they are focussed on popularising freshwater turtles and tortoises and getting more researchers to study them. “Many stretches of rivers across India which are unprotected hold large populations of turtles which can serve as ideal study sites to study freshwater ecology, feeding and reproductive ecology or even community ecology in diverse hotspots of north and northeast India. We need more constructive research which will ultimately improve our understanding of the biology and requirements and ecosystem services freshwater turtles provide which can help to better conserve them,” said Mital.

Adds Dharwadkar, “Unless we carry out urgent interventions in

terms of research and education, we may end up losing species. Funding agencies often focus on mammals to fund or birds or even marine turtles, but more than 50 percent of freshwater turtles are threatened with extinction.”

“Yes, furrries are cute, but the shellies deserve your love too!” she urges.



*Black pond turtle in Uttar Pradesh. Photo by Sabiha Khan.*