Facets of the North-east

The Loktak: The Mirror of Manipur

Tayenjam Bijoykumar Singh

The great Loktak lake of Manipur is one of the important landmarks of the North-east and an object of great pride for every citizen of Manipur. It is described by the author as the largest freshwater lake in North-east India. The author tells us about how the legends of the land of Manipur are intimately intertwined with this extraordinary gift of nature to the people of Manipur. The author’s prose gets lyrical while describing the natural beauty of the lake. In this article, he mainly tells us about the role played by the Loktak Lake in shaping the culture of Manipur. We also are served with some well-known folktales and historical events associated with the lake.

The readers of Ishani will recall another important article by the present author Tayenjam Bijoykumar Singh on the outstanding dramatist and performer of Manipur Shri Ratan Thiyam. Paying heed to our request, he has given us this beautiful piece of writing on the Loktak. He has picked up the caption for the article from one of the songs sung by ballad singers of Manipur. An Engineer by profession, Shri Bijoykumar Singh has many literary achievements to his credit. We are indeed very happy to present his article on Loktak to the country-wide readership of Ishani.

Shri Bijoykumar Singh has also raised alarm about the threat which has emerged to the very existence of this beautiful gift of Nature to Manipur nay to India. The environmental degradation, thoughtless encroachments and the siltation taking place at an alarming rate are the disturbing features of this threat. He also refers to a sign of hope that has emerged through the creation of Loktak Development Authority (LDA) by the State Government. We, however, feel that protection of Loktak and retaining its multi-faceted beauty and grandeur should be the concern of not only the people of Manipur but the people of India as a whole. The environmental activists of our country should take note of this.

The reading of this article is a must for all who are concerned and associated with the colourful North-eastern region of our country.

N.Th.

Author

Imphal, the capital of Manipur can be reached either by road or by air. There is no direct rail link. Those coming by road can see the magnificent ranges of hills, low lying clouds kissing the hill-tops at times, deep wooded gorges, tiny streams cascading down the hillsides, milky-white brooks meandering gently through hilly
terrain and the serpentine roads running along the hillsides. The call of birds, chirping of crickets and the cool fresh mountain air refresh the mind and body along the long tiresome journey. Those coming by air will miss all the lovely sights and close encounters with nature, but Manipur has still something to offer them to compensate for what they have missed. The moment the aircraft crosses the ranges of hills and reaches the valley, a surprise awaits them in the form of a beholding sight that can be rivalled only by a few places on earth. Before landing at Imphal Airport the plane normally circles over the valley. Through the window one can see the entire valley encircled by ranges of bluish-green hills. On the southern side of the valley lies a vast ‘sheet of water’ reflecting light like a mirror. Some hillocks protrude from the water surface. Those are islands. One also can see strange greenish circular markings here and there breaking the continuity of the mirror. The circular markings are nothing but man-made objects composed of floating vegetation used by fishermen for herding and catching fishes. Floating swampy islands, called Phumdi in the local language, are also there but unaccustomed eyes cannot pick them out for they look like vast green meadows from above. Phumdi consists of a thick mat of humus and dead vegetation, one fifth of which is above water and the remaining four-fifths are below the surface of water.

The vast sheet of water is the Loktak lake, the largest fresh water lake in the north-eastern India. During the Raj the British made this lake famous as a good place for geese and duck shooting. The size of the lake varies according to the season, often reaching the length of 35 km and breadth of 13 km during the rainy season. Thanga, Karang, Ithing and Sendra are the prominent islands in the lake. The lake is rich in biodiversity and was designated as a Wetland of International Importance under the Ramsar Convention in 1990. It is a crucial breeding ground of a number of migratory fishes from the Irrawady-Chindwin river system and continues to be vital as a fish habitat. The lake also supports a significant population of resident and migratory waterfowls. For many people, especially the fishing community living in the islands and floating huts built on Phumdi, the Loktak lake is the only source of their livelihood.

Huts built on Phumdi
Ballad singers of Manipur often describe the Loktak lake as the mirror of Manipur. It has different connotations. It may simply mean that its water surface looks like a mirror. In another sense it highlights the lake’s association with the history of Manipur. It is a mirror reflecting the history of Manipur and the changes in the society down the ages.

In the prehistoric times the valley was nothing but a vast lake. It started drying up and people from the surrounding hills descended to settle in the valley. Till the end of the nineteenth century, Manipur valley was dotted with numerous lakes and water bodies of which the Loktak lake is the largest. Drying of lakes is a natural phenomenon but it takes thousands of years for a lake to dry up completely. Man, nature’s greatest enemy, has hastened the process of drying of lakes. Most of the smaller lakes in Manipur have dried up; only a few are left now. The Loktak lake still stands as a testimony of the bygone era when the valley was completely submerged under water.

In the beginning of the Christian Era, the valley was divided into seven independent principalities, each with a distinct dialect of its own. The principality of the Ningthoujas, with headquarter at Imphal, was one of them. In course of centuries, this principality by virtue of superior organisation and advantageous location overpowered and annexed the other six principalities.

The dialect of the Ningthoujas got better and greater prestige. Initially, the Ningthoujas enriched their dialect by borrowing words from the other dialects. Gradually, the dialect of the Ningthoujas assimilated the other six dialects and also brought the people into its fold. The people of the seven principalities completely fused together to form the present day Manipuri speaking people. The speakers of Manipuri Language call themselves Meiteis. Manipuri Language and Meitei Language are one and the same. Modern Manipuri literature is generally written in the dialect of Imphal and its immediate neighbourhood.

Down the ages the Loklak lake has played an important role in the lives of the valley people. It is also closely associated with their culture and traditions. The legendary heroine Thoibi, a royalty and her lover Khamba, an orphan, belong to Moirang, a town on the western shore of the lake. It was the capital of an independent principality of the same name as late as the middle of eighteenth century. It comes as a surprise considering the fact that during the reign of the Manipuri king Meidingu Mayamba, aka Garibniwaz (1709-1748), Manipur had extended its boundaries up to the confluence of the Chindwin and Irrawaddy rivers (in Myanmar). The people of Moirang were known as the Moirangs and they were treated as a separate tribe before they merged into the present day Manipuri speaking people. Now, they are treated as a clan of the Meities.

Moirang occupies an important place in the history of India’s struggle for independence. During World War II, Moirang was the headquarters of Azad Hind Fauz. Colonel Malik of the Indian National Army, (INA) hoisted the Tricolour for the first time on Indian soil on April 14, 1944. Now, a memorial has been built at that place. The library-cum-museum at the complex has a good collection of the relics of INA’s struggle for independence.
On the north eastern shore of the Loktak lake lies Khuman now known as Mayang Imphal. In the olden days, it was also a principality. It was the stronghold of the Khumans, one of the seven tribes that ultimately merged into the present day Manipuri speaking people. The intercourse between the Moirangs and Khumans has produced many legendary love stories. All these legendary love stories are narrated with the Loktak lake as the backdrop since both Moirang and Khuman are located on the shore.

The story of Khamba and Thoibi is one of them. Pureiromba, Khamba’s father was a Khuman who had migrated to Moirang. Khamba’s parents died when he was still a baby, leaving him under the care of his elder sister, Khamnu, a little girl. They had no one to turn to since their father was a migrant from Khuman and their mother, who had no family of her own, was of mysterious origin. Khamnu brought up Khamba with great difficulty. When she was a little older, she collected firewood from the forests in the nearby hills and sold it at Moirang market. She struck acquaintance with Thoibi, a royalty, who came there quite often accompanied by her attendant, Senu. Coming to know of the difficulties Khamnu faced to earn their livelihood, Thoibi arranged to engage Khamba to look after their cattle. Khamba and Thoibi soon fell in love. Nongban, a dignitary, was Thoibi’s suitor. He was a hurdle in the relation between Khamba and Thoibi. After many twists and turns in the story, Khamba ultimately married Thoibi but they did not live long.

Thinking of playing a prank, one day Khamba pretended to leave home on a long journey. Thoibi was left alone in the house. When darkness began to fall, he returned and knocked on the door lightly. She did not open the door. But, he kept knocking. She thought some unruly youths were teasing her – she shouted with a stern warning from inside asking them to go away. Instead of stopping he knocked on the door harder and harder. An infuriated Thoibi took a knife with her and went to the front door. She opened it a bit and threw the knife blindly into the darkness outside. The knife found its target – it hit Khamba on the throat and killed him. When Thoibi
opened the door wide, she realised what she had done. She took the knife and committed suicide by stabbing herself to death. Thus the love story came to a tragic end.

The love story of Khamba and Thoibi is immortalised by the ballad singers singing to the accompaniment of Pena, a local bow and string instrument. The graceful Khamba-Thoibi dance is attributed to them. They are said to have performed the dance as an offering to Lord Thangjing, the ruling deity of the Moirangs.

Another is the story of Khuyol Haoba and Yaithing Konu. Konthouremba, Khuyol Haoba’s father was a high official of Moirang. Khuyol Haoba’s parents died when he was a mere child, just learning to speak. At that time his elder sister was also a little girl. He and his sister were adopted by different families. Khuyol Haoba was turned out by the family who had adopted him only to be adopted by another family. Though the second family loved and cared for him, by the cruel turn of fate he was separated from them and forced to lead the life of a fugitive. He grew up in the Loktak lake, staying in a make-shift hut built on Phumdi amidst the wilderness, away from the humans. A chance meeting with Yaithing Konu, the only child of a high official of Moirang, blossomed into a passionate love affair. She however was married off to Khuman Kaoba, a powerful man of the Khumans, against her will under compelling circumstances – to fulfil a promise made to Kaoba by her father for sparing his life.

The Moirangs invited Kaoba, their son-in-law, to joint in a hunting expedition. When he and his men were halfway to Moirang, their way was blocked by Haoba, who had become a high official by then, and his men. He threw a challenge to Kaoba for a man to man trial of strength. After a ferocious fight, Haoba defeated Kaoba. He, a Khuman, could not stand the humiliation he faced at the hands of someone from his wife’s place. After returning home, he tried to kill Yaithing Konu in a fit of anger. She escaped to her parental house unhurt.

Kaoba was restless; he could not easily accept defeat. He went to the king of Moirang and requested to allow him to meet Haoba in a single combat. Haoba readily agreed but the king would hear none of it thinking that he was inexperienced in fighting – he would not be able to face Kaoba who had already made a name of himself as a great fighter. The king put Nongban, another one of his trusted warriors, in Haoba’s place. Kaoba had to give in to the king’s wish. As was the custom in those days the two combatants were made to stand a great distance apart. When both Kaoba and Nongban were at their respective places, Kaoba took out his spear and threw it at Nongban, who took out his bow and shot an arrow. The arrow not only shot down the spear but also hit Kaoba on his chest and killed him. After that the two lovers, Khuyol Haoba and Yaithing Konu, were united. To this day, there is still a strong belief among the people of Mayang Imphal that marrying a girl from Moirang would bring ill luck to the husband and he would meet early death like Kaoba did.
Lotus in Loktak

An islet in the Loktak lake, Sendra is now connected to Moirang by a road built on earthen embankment. The short drive from Moirang to Sendra during the summer months when water lilies and lotuses bloom in abundance on both sides of the road is a feast for the eyes. Standing at the highest point at Sendra, one can get a good view of the lake and the valley surrounded by ranges of hills. The breathtaking scene that appears before the beholder would surely remain imprinted in the memory forever – the floating huts of fishermen built on Phumdi anchored with long bamboo poles, the deep blue hills in the distance and the white fluffy-cloud-decorated azure sky mirrored on the vast expanse of water surface, the dugout canoes cutting across spreading ripples on the calm surface!
Keibul Lamjao National Park, the only floating wildlife sanctuary in the world lies in the north-eastern corner of the lake. From Sendra one can see it as a vast meadow with a hillock in the centre. This floating sanctuary is the home of a very rare and extremely elegant deer, the brow antlered deer or Sangai. Its antlers sweep forwards and beams backwards in a continuous, graceful curve.

Sangai had officially become extinct in 1951. But much to the surprise and relief of animal lovers it was reported to be still living in Phumdi in the Loktak lake. In the past Sangai was under the protection of the kings of Manipur. It is difficult for a man to walk on Phumdi – it shakes and moves under the feet. One has to be careful and sure-footed to be able to walk on it but Sangais do not have problem in walking on Phumdi. By living there for thousands of years, they have developed slightly splayed-out hooves. Their pasterns, hairless and horny, enable them to walk with them bent down on the reeds and grasses without sinking through Phumdi.

Unfortunately, Phumdi is becoming thinner and thinner with the passing of each year making it difficult for Sangai to walk freely. One of the main reasons attributed to the cause of the thinning of Phumdi is the barrage that is constructed at Ithai to block drainage from the Loktak lake to store and maintain water level and for generation of electricity. Before this barrage was built, during the dry season, when the depth of the lake was reduced, roots of reeds and other vegetation growing on Phumdi could reach the soil at the bottom of the lake and suck nourishment to sustain and maintain their thickness. After the barrage was constructed, the cyclic feeding of reeds and plants growing on Phumdi has been disturbed. This has led the reduction of the thickness of Phumdi.
Another peril is the reduction in the depth of the Loktak lake. Large scale deforestation in the hills has resulted in washing away of the top soil during the monsoon. Debris, soil, etc., whatever materials are brought down by the rivers feeding the lake are ultimately deposited at the bottom of the lake. Siltation is going on at an alarming rate. It is harming the lake. Large scale deforestation in the hills has also done extensive damage to the hills – with the protective plant cover removed, the exposed raw soil cannot trap water and retain moisture. All these have led to flash floods in the valley during the monsoon and drought in the hills during the dry season.

Manipuri women are known for gracefulness, endurance, untiring labour and their ability to fight social injustice. They excel in weaving, arts, crafts, and sporting practices. They have kept the culture and traditions of Manipur alive. Whenever the situation calls them to act they come to the forefront. They had done so many times in the past to protest and fight against the state authorities. During the Raj, the Loktak lake was witness to the wrath of Manipuri women. G.P. Stewart, I.C.S. who was the President of the Manipur State Durbar from 1933 to 1936 faced a dangerous situation when he went to make inquiries regarding a dispute about fishing in the Loktak Lake. He was put in a boat with some local leaders. Women stood on the shore, shouting, screaming and hurling abuses at them and blocking his way. Stewart could not help but bow down to the women. Only after he conceded to their demands was he allowed to return to the base.

The glorious days of the Loktak lake seems to be coming to an end. It is very sick now. One should not get cheated by its outward appearance. Anyone who has been
observing it continuously for some years would be able to tell easily the changes that have taken place. It is becoming shallower and shallower with the accumulation of all the debris and dirt carried down by the rivers falling into it. The toxicity level of its water has risen.

The Loktak lake, the mirror of Manipur, seems to be reflecting the present day turmoil in Manipur – a perfect mirror of the society. If proper attention is not given now, it will be lost forever. There is a faint ray of hope for its survival. A society under the name and style of the Loktak Development Authority (LDA) has come into existence to save the lake. The LDA is a registered society under Sec. 20 of the Societies Act XXI of 1860, having registration No. 333/Imphal dated 25th March, 1986. The Authority was reconstituted by the Government of Manipur in July 1987 with the Chief Minister or his nominee as the Chairman of the Authority. The Member Secretary is the Project Director and also Executive Head of the Authority.

The LDA is cleaning and deepening the lake. Only time will be able to tell how far they are successful in their endeavour.

As we were getting ready to send this article for printing, we came across the write-up below which projects serious concern about the threat that is posed to the threatened species of Sangai deer of Manipur. This is one more example to show that a hasty and short-sighted intervention in the system that has prevailed in nature creates serious problems. A delicate balance exists between animal life, vegetation, water, earth, sky, and other gifts of nature. This delicate balance should not be disturbed in haste. It is heartening to note that there are knowledgeable, conscientious citizens in the present day world who understand threats and resort to communicate their concern with their fellow citizens.

Shri Tayenjam Bijoykumar Singh, the author of the main article has also drawn attention to the threat posed to the most valuable gift of nature that Loktak Lake is. The write-up below describes the threat specifically with reference to the survival of the Sangai deer.

A CRY IN THE WILDERNESS*

*(A concerned individual on the threat to the existence of Sangai deer)*

The Sangai - the endemic, rare and endangered Manipur Brow-antlered deer (Cervus eldi eldi Mclelland) - faces an uncertain fate today. The deer species, fending for itself in its last safe refuge in the wild at Keibul Lamjao, is caught in the phenomenal conflict between development and the natural environment. Humans, supposed to be the guardian angel of the Sangai, have been the very reason for the threat on the existence of this highly spoken of deer species.

**Sangai in Manipur Society:**
For reasons historical and social, closely associated with the cultural life of the Manipurs, the Sangai has attached importance for Manipur and its people. In fact, the Sangai assumes a significant symbol of precious heritage - the natural and the material heritage - that in more than one ways identifies Manipur and its people to the rest of the world community.

Culturally, the Sangai finds itself imbedded deep into the legends and folklore of the Manipuris. Based on a popular folk legend, the Sangai is interpreted as the binding soul between humans and the nature. The slaying of the Sangai, an unpardonable sin, is conceived as the rude breaking up of the cordial relationship between humans and
the nature. When humans love and respect the Sangai, it is respecting nature. In the Sangai, therefore, humans find a way of expressing their love for the nature. Socially, the Sangai is the symbol of a prized possession of the State. Identified as one of the rarest animal species in the entire world, the Sangai is the apple of the eye for the people. Talk of Manipur, and one of the first things to introduce the State is the Sangai, other than polo, its classical dance, sports and films.

**Present status:**
In March 1999, the annual Sangai census recorded around 149 heads in the Keibul Lamjao National Park, KLNP. This last natural habitat of the deer - covering a total of 40.5 sq.km with a core zone area of 15 sq.km, is peculiar by itself as it is mostly made up of the floating biomass locally known as Phumdi. The KLNP forms part of the southern portion of the greater Loktak lake, and so the park is within the water body area of the Loktak. It is for this reason that the park has often been termed as the 'only floating national park in the world'.

The Sangai faces a two-pronged danger to its life. Firstly, its habitat is steadily degenerating by reason of continuous inundation and flooding by high water caused as the result of artificial reservoir of the Loktak hydroelectric power project. Secondly, poachers are out there to trap and slay the deer at the slightest opportunity. In February 1998 poachers trapped two Sangai doe inside the KLNP, killing both female.

In 1983 the 103 Megawatt capacity Loktak hydroelectric power project was commissioned with the objective of ensuring rapid development in the State. One failure of the project has been that it has never been able to provide regular power supply to the villages in the Loktak lake periphery. And a very disturbing effect of the project has been its share of harm to the ecology and the environment of the Loktak, threatening the lake ecosystem, the humans and their lands, the wildlife, and all other life forms dependent on the lake for their living.

A maximum high water level of 168.5 meter above MSL is maintained in the Loktak Lake to feed the reservoir for the hydel project. At this level, much of the land on the periphery of the lake had been submerged under water, rendering huge loss of productive agricultural lands and localised fish culture farms. On the other hand, this high water level had wreaked havoc in the KLNP. The high water level, maintained continuously through the year, had disturbed the natural life cycle of the vegetation growth, the phumdi, upon which the Sangai thrives. The deer feed on several types of vegetation that grow on the phumdi. The vegetation also provides shelter to the deer and other wildlife in the park.

The life-cycle of the phumdi involves floating on the water surface during season of high water as in the monsoons. In the lean season, when the water level reduces, the biomass come into contact with the lake bed and they secure the required nutrient from there. When the rains come again and they become afloat, the biomass have enough 'food' - the nutrient - stored in their roots and their life continues. What is happening now, according to local scientists who are studying the phenomena, is that with continuous high water in the lake throughout the year much of this process of 'feeding' on the nutrient in the lakebed had discontinued. The result - the biomass are losing weight and getting thinner by the year. Around January last week in 1999, it
was reported that a large chunk of the biomass in the northern part of KLNP had broken up into pieces and had drifted freely from the park area. This was a bad sign for the Sangai habitat. It spelt out very clearly that the beginning of the end of the Sangai habitat had begun.

Very recently this year, reports came in about local people cutting up the phumdi into sizeable pieces and then towing away these with dugout canoe for 'selling' to fish culture owners. This is another potential danger to the Sangai habitat. It meant humans are now aiding the process of annihilating the habitat area, supplementing to the rapid degeneration of the habitat.

**Conclusion:**
The Sangai - a jewel in the crown for Manipur - is one of the most unfortunate animals living in the world today. Human activity - read development process - had caused extensive damage to its last natural habitat, threatening its very existence. Humans continue to hunt and slay the deer on the sly in spite of legislation (Manipur Wildlife Protection Rules 1974) and public outcry. There is no State sponsored conservation programme for securing the safety of the deer and its habitat. Manipur is poised to lose this animal wealth, forever, if timely help do not come now.

*Courtesy: Salam Rajesh


Loktak Hydro-Electric Project

Water from the Loktak lake is used to generate electricity. On January 1, 1977 Loktak project was transferred to NHPC Ltd. A barrage is constructed at Ithai to regulate the outflow from the lake. Water from the lake is taken through a tunnel to the power house at Leimatak, where 3 generating units of 35 MW each are installed. This project was completed and commissioned in 1983.

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<th>SALIENT FEATURES OF LOKTAK HE PROJECT</th>
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<tr>
<td>Capacity (reduced capacity)</td>
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<tr>
<td>Annual Generation</td>
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<tr>
<td><strong>Project Cost</strong></td>
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<td>Year of Commissioning/Completion Schedule</td>
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**TECHNICAL FEATURES**

**ITHAI BARRAGE:**

- Height: 10.7 m
- Length: 58.8 m between abutments
- Waterways: 5 spans of 10 m each
- Discharge: 566 m³/sec

**POWER CHANNEL**

- Open Channel: 2.323 km
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<tr>
<th><strong>•</strong> Cut and Cover</th>
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<tr>
<td><strong>•</strong> Total Length</td>
<td>3.40 km</td>
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<tr>
<td><strong>•</strong> Bed Width</td>
<td>18 m</td>
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<tr>
<td><strong>•</strong> Discharge</td>
<td>58.8 cumecs</td>
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<td><strong>•</strong> For Power</td>
<td>42 cumecs</td>
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<tr>
<td><strong>•</strong> For irrigation</td>
<td>16.8 cumecs</td>
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**HEAD RACE TUNNEL**

- Diameter : 3.81 m horseshoe type
- Length : 6.62 km
- Velocity of flow : 4.5 m/sec
- Grade : 1 in 200 and 1 in 1000
- Length of Pipe Tunnel : 0.272 km
- Total length with Pipe Tunnel : 6.892 km

**WATER CONDUCTOR SYSTEM**

- 10.292 km
- Channel with Cut and Cover : 2.40 km
- HRT with Pipe Tunnel : 6.892 km

**SURGE SHAFT**

- Diameter : 9.15 m
- Height : 60 m