

STATUS OF RIVER DOLPHIN *Platanista gangetica* OR 'SHIHU' OF UPPER ASSAM

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The river dolphins *Platanista gangetica* which is locally known as 'shihu' is found in the rivers Ganges and Brahmaputra. Their distribution is extended to Nepal (Narayani and Kamali rivers) Bangladesh (Padma and Meghana rivers) Karnaphulli and Sangu rivers) and Bhutan (Manas river).

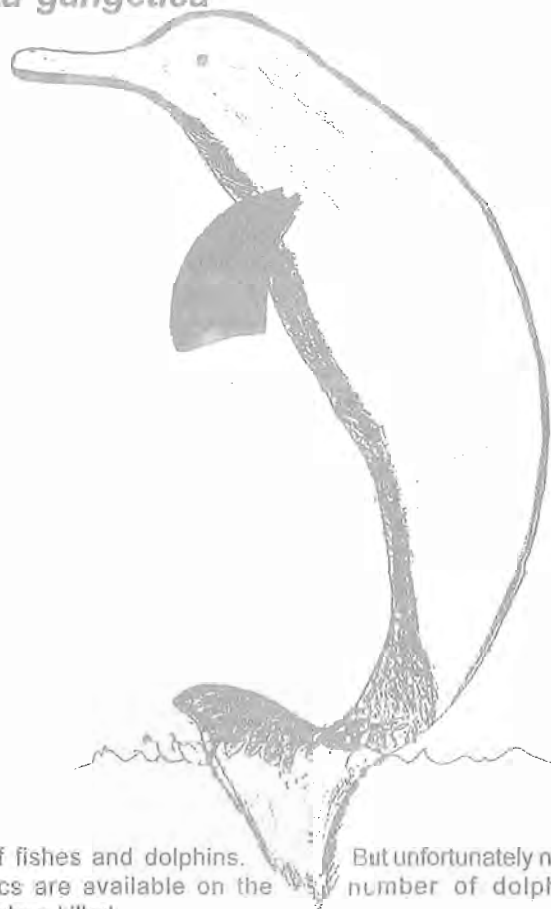
J. Anderson, a British Naturalist carried out an extensive study on the distribution ecology and morphology of the species. He found them abundant in the Brahmaputra and Ganges rivers. He collected them with their stomachs gorged with prawns. But it was about 20 decades ago. In 1970's G. Pilleri a Swiss Scientist contributed a great deal to our knowledge of its anatomy, sonary mechanism and embryology. R.S. Lal Mohan, S.C. Dey, Sujit Bairagi and Roy conducted a detailed study of its population and ecology from South Salmara to Sadiya. They could count 268 dolphins in the river Brahmaputra with a density of 0.41/ km. A few dolphins are found in the rivers Kulsi, Subansiri and 'Mihi Bheel' of Kaziranga National Park.

The river dolphins being mammals have to come to the surface for breathing. It has remarkable aquatic adaptations like well developed flippers (which are the modified fore arms) thick fat layer blubber (fat) as heat regulator, mammary glands near the arms to feed the calves, sharp teeth numbering 28 on each side of the jaws to hold and above all a well developed 'sonar' mechanism which makes its life possible in the murky, silt laden waters of the rivers. The 'sonar' or the development of the echolocation mechanism has compensated the loss of visual sight or vision.

The skull of the ganges dolphin is unique and different from other dolphins. It has a well developed 'maxillar crest' which looks like a hood. This unique development or evolution has placed the ganges river dolphin in a unique category among the dolphins. Another characteristic feature is the atrophy of optic lobe of the brain. In other mammals the optic lobe (vision part) is well developed. The optic nerve and eyelens are degenerate. It is with help of ultra sonic sound the dolphin navigates, captures food and even avoids fishing nets.

But unfortunately, the man, the only enemy of the dolphin is not kind to them. The dolphins are killed in gillnets, harpooned for its meat and oil. The habitat degradation has seriously affected them. Various human activities like deforestation, dams, barrages, fishing (gill netting) have severely affected the dolphin population. The number of dolphins have come down, especially between Tezpur and Sadiya in upper Assam.

It was observed that the earth quake of 1950 caused agradation of the river-bed resulting in large shallow areas. The number river islands (chars) have also increased. During the above earthquake hundreds of dolphins were killed by the seismic activities. It was reported that the river was black in colour near in Dibrugarh and Majuli island causing large scale death



of fishes and dolphins. But unfortunately no statistics are available on the number of dolphins or fishes killed

Besides the natural cause, gillnets pose great threat to the species. There are about 50 gillnets operated from Tezpur to Sadiya. Very often the dolphins get entangled in them and die when they try to take the fishes caught in them. The calves of the dolphins die in more numbers than the adults due to their playful nature and less developed sonar senses.

Apart from the gillnets the dolphins are killed by the 'Mising' people of upper Assam. Harpoons are used to kill the dolphins. Some of the tribals are experts in the profession. The meat of the dolphin is relished and the oil is extracted for use as a medicine for rheumatism.

In places like Dihing mukh, Dihowmugh and Disangmukh the dolphins are caught. They are purchased by the 'Mohildhar' who uses the meat of the dolphins to lure the fishes espe-

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cially the cat-fishes. They bury the dolphin meat in the river bed and the odour released by the carcass attracts the fishes. The dolphin meat is sold in the fish markets of Moran, Dibrugarh and Saidya. The oil of the dolphin is also used as a bait in fishing the catfishes like *Clupisoma garua* (Neria fish). In places like Disangmukh lactating (milking) females are caught in the gillnets. Though the entanglement of dolphins in the gillnet is a fishery related problem, killing of dolphins by harpoons is quite unjustifiable. The River Dolphin Protection Committees of Jorhat, Sibsager and Dibrugarh can play an important role in creation of awareness among the fishermen especially the Mising people from killing the river dolphins.

The main hurdle in implementing the wildlife Protection Act, 1972 which prohibits killing of dolphins and possession of dolphin oil or meat, is poverty among the river fishermen and lack of awareness. It is true that poverty drives a person to any extent. But in the meantime as civilised persons, should we allow such ruthless killing of a highly developed and unique animal like the river dolphins? Today there are many profitable avenues of life. If we take the statistics of 'Bihari' or 'Bangladeshi' fishermen, their number will not exceed 75 families. These people are responsible for killing the dolphins and live on the dolphin oil-based fishery of 'Neria' fishes. It may be pointed out that in early days there were many families which depend on hunting (shikari). Now many have opted for better jobs. Similarly the 'dolphin hunters' also should be provided with better jobs. We should not allow the annihilation of the river dolphin population. It may be observed that the dolphin oil bait fishery is of recent origin by the migrant Bihari and Bangladesh fishermen. Further after a strenuous and pain taking experiments in Ganges and Brahmaputra it has been found that the crude shark liver oil can be used as an effective alternative to dolphin oil for the preparation of fish bait. The crude shark liver oil costs about Rs. 50/ kg whereas the dolphin oil costs about Rs. 75/ kg. The availability of the dolphin oil is seasonal. But the shark liver is always available as it is a bye-product of shark fishery. The River Dolphin Protection Committees of Dhubri and Goalpara distributed the shark liver oil to the fishermen at a subsidised rate of Rs. 25/ kg. The feed-back received from the fishermen was very encouraging. The Dhubri fishermen could get 6-7 kg of Neria (*Clupisoma garua*) with one kg of shark liver oil costing Rs. 25/-. One kilogram of garuah costs Rs. 55/-. One fisherman could get Rs. 300/- worth of fishes with Rs. 25/- worth of shark liver oil. Hence it is a dependable alternative to dolphin oil. The River Dolphin Protection Committees at Dhubri, Goalpara, Guwahati, Jorhat, Sibsager, Dibrugarh and Majuli have great role to play in protecting the species. As the committees have the Deputy Commissioners as Patrons and the representatives from administration, State Fishery Department, mohildhars, fishermen and local NGO's and other interested persons as members, a pragmatic and practical approach can be drawn to protect the species.

It may be mentioned that the protection of aquatic life is more difficult than the terrestrial animals as mortality of land animals can be easily noticed whereas that of aquatic animals go unnoticed. Hence unless the fishermen are motivated and made to understand the need to protect this unique animal, it is difficult to save them. It is estimated that 50-60

dolphins are killed in Brahmaputra annually and in the upper Assam alone from Tezpur to Saidya about 30 dolphins are killed. The dolphin population of this area is only about 160. Hence the mortality is about 18.75% which is very high for the river dolphin with low rate of reproduction (one calf for two years). If the mortality is allowed at the present rate the species cannot survive for long.

It is disheartening that though the high profile animals like tigers, rhinoceros, elephants and other mega animals receive great attention and millions are spent on them, the conservation of river dolphin has hardly received any attention. The Assam Govt. has not even mentioned it in the tourist guides or in the wildlife sanctuaries. The occurrence of river dolphin is not highlighted. But it is gratifying that the Williamson and Magor Ltd, Assam has shown great interest in the protection of the species through the Assam Valley Wildlife Society. The encouragement of Mr. Sandy - Lumsdaine Williamson and Magor and Mr. A.M. Khan, Chairman, Assam Valley Wildlife Society is remarkable and worthy of emulation. However local efforts are essential. It is with this objective the River dolphin Protection Committees are formed to create awareness and to prevent the mortality of the species. By organising a seminar on the River dolphin of upper Assam the Sibsager River dolphin Protection Committee has given a lead to other such committees to organise local meetings with the help of service organisation like Rotary and Lions Clubs of Sibsager. The role of the service organisation of Sibsager to make the seminar a reality is praiseworthy.

Recommendations

1. Regular periodic monitoring of the river dolphin population from South Salmara to Saidya.
2. The local 'Mohildhars' and fishermen Co-operative Societies should be made aware of the depleted status of the river dolphins. They should instruct their members not to harm the river dolphins.
3. The River Dolphin Protection Committees should be strengthened along the banks of the river.
4. Schools and colleges on the banks of the river should be involved in the works related to the conservation of the river dolphins. Eassy competition, elocution competition on the river dolphins can be arranged as done by the St. Mary's School, Dibrugarh with the effort of Sister Mary Sebastian and by Holy Names Schools of Sibsager with the help of Father Joy Pallikunna.
5. The forest (Wildlife) and the fishery departments should take more interest in the protection of the species. Wildlife Protection Act 1972 should be perused seriously.
6. Operation of the harmful nets 'Kapda jal' made of mosquito webbing the current jal (gillnet) and the fasi jal (gillnet with large mesh) should be banned at the confluence of the rivers like Disangmukh, Dihowmuk and Dhisingmukh.
7. The fish oils like crude shark liver oil should be popularised as a bait for the 'neria fishes' in the place of dolphin oil. The belief that dolphin oil is good for rheumatism should be dispelled.
8. The river dolphin should be declared as a 'National aquatic animal'.
9. The Kulsi river and the lower reaches of Subansiri river should be declared as 'river dolphin sanctuaries'.