

History and reason for the first human-caused extinction of a dolphin species.

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Introduction:

Dolphins has always been regarded as smart “fish” and I have been fascinated by them since I was a little girl. When I came over a list of endangered species I found the fresh water dolphin named “The Yangtze River dolphin” (*Lipotes vexillifer*.)

The dolphin, also called Baiji, lives in the middle-lower part of the Yangtze River and the neighboring Qiantang River in China. There are many Chinese legends about how the dolphin came to existence. Some legends tell a story about a maiden who runs away from her violent father and by magic, becomes a beautiful white dolphin.

This is how the dolphin became “The Goddess of the Yangtze”.

Old Chinese texts refer to the dolphin as “The worshipper of the wind” because sailors could watch the dolphin’s movements, which would indicate the weather.

So my assignment will be to look at the reason for the extinction of the Baiji.

Brief history:

The Baiji is a protected species in China and is also on the IUCN list over threatened species. In 1998 it was considered critically endangered.

Many searches and population estimations have been done since the 1980s.

No dolphins have been seen in the Quantang River since 1950, and fewer and fewer observations of the species have been done in the Yangtze River.

A search expanding over 500 km of the historical 1700 km of Baiji habitat, lasted from 1989 to 1991. In 1989, 7 Baiji were observed and 10 during 1990. A bigger group was later seen, about 30 individuals.

During another search of the Yangtze River in 2006, between November 6 and December 13, no Baiji were found. The Yangtze River dolphin is most likely extinct, and is the first documented vertebrate species (over 100kg) that has been lost for over 50 years.

The extinction:

The biggest treats of the Baiji is the high traffic on the river, pollution, loss of habitat and overfishing and fishing. Yangtze River happens to be one of the most trafficated rivers in China. The number of cargo, passenger ships and fishing boats has increased during the last 30 years. It’s been reported that the river traffic in the lower part of the river has increased with 10% every year for the last 30 years. (Zhou & Li,1989) And because of economic development along the river this traffic will only increase in the future.

Lack of food due to overfishing may also be one reason to the extinction of the dolphin. Uncontrolled fishing in the river is a big problem. Not so strange when you consider that the Yangtze region is

home to approximately 10 % of the human population. (Zhou *et al.* 1998) Collisions with boats and meetings with hooks seem to be the biggest cause of the Baijis deaths. During 1970 and 1980 half of the deaths were caused by rolling hooks and other fishing gear while the electro-fishing stood for 40% (Zhou & Wang 1994; Zhou *et al.* 1998). This is only estimated from the recorded deaths.

Since the Baiji has bad sight, it relies on a sonar system. The noise from the boats can disturb this sonar-method the dolphin use to navigate and catch fish. The increased traffic on the river the last 30 years seems to have had a great impact on the population of Baiji, causing a lot of deaths and probably hunger.

During the “Great leap forward”, a campaign by the Communist party of China, and during the regiment of Mao the people around the river and fishermen started hunting the Baiji in order to survive. The reason for the hunting of Baiji was lack of food for the people, due to collection of most of the food produced by the farmers. This continued over the sixties and caused the population of the Baiji to decrease.

The Yangtze River is not as polluted as many of the rivers in China. Because of the dilution factor of the water few organic chemicals have been found, however the concentration of anions, cations, nitrogen and phosphorous have increased. Even if the concentration is just above detection limits it will have a huge impact on the water quality and the life in the river. The concentration of Hg, As and Tl was up to four times the standards, an increase since the estimation 20 years ago. Waste water is also discharged into the river, around 80% without treatment. The increasing pollution is a treat to the ecosystem of the river and has most likely had an impact on the population of Baiji. The effect of the pollution on the animals in the river is being studied by scientist. They take meat samples and look at the concentration of different accumulating substances. This could indicate if the pollution in the Yangtze River has had an impact on the population of Baiji.

Yangtze River has in the last decades been built out. Large power stations and huge dams have been constructed. The start of this built out happened during “Great leap forward” campaign, from 1949-1976, and caused loss of habitat for the Baiji.

The reproduction of the Baiji is still a mystery for the scientists, but it is believed that the loss of habitat may have had a great impact on the reproduction of the species. The loss of habitat may have caused stress and thereby making it harder for the animals to breed.

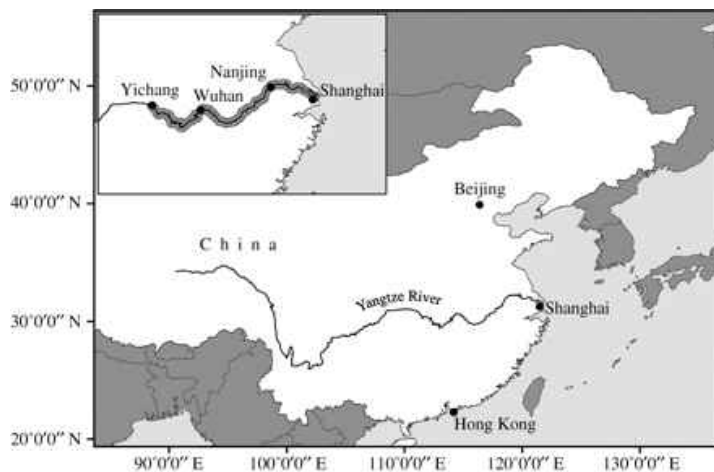
With the last search after the Yangtze River dolphin came up empty, the dolphin is said to be extinct.

This is a great loss, and it was caused by the massive human impact on the river.

The loss of “The Goddess of Yangtze” should teach us that species cannot save themselves from extinction and that we need to look at the impact we have on nature to prevent loss of species. The species that are lost are lost forever.

“The Yangtze River Dolphin.” Male individual with the name Qi Qi. Lived in Wuhan dolphinarium from 1980-2002. Only Baiji who has lived long in captivity.

(Source: <http://rsbl.royalsocietypublishing.org/content/3/5/537.full#sec-1>)



The survey route in 2006. Searched the entire historical habitat of the Baiji. Search came up empty.

(Source: <http://rsbl.royalsocietypublishing.org/content/3/5/537.full#sec-1>)

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