

ORIGINAL DESCRIPTION OF THE GANGETIC DOLPHIN, *PLATANISTA GANGETICA*, ATTRIBUTED TO WILLIAM ROXBURGH

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IN cetological literature the original description of the Gangetic dolphin is usually attributed to Heinrich Julius Lebeck. In the third volume of "Neue Schriften der Gesellschaft Naturforschender Freunde zu Berlin" that appeared in 1801, this author published a short paper entitled "Delphinus gangeticus beschrieben von Herrn Heinrich Julius Lebeck zu Trankenbar". "Trankenbar" obviously corresponds to the locality "Tranquebar" in southeast Madras.

In the same year, 1801, Volume 7 of "Asiatick Researches" was published in Calcutta and contained a paper of William Roxburgh entitled "An Account of a new Species of Delphinus, an Inhabitant of the Ganges".

It is, therefore, virtually certain that the two descriptions of the Gangetic dolphin were published in the same year, but the reviews contain no definite indication as to which of the two appeared first.

Roxburgh's paper was republished in 1803 by Maiden and Wilson of London in a second edition of "Asiatick Researches, printed verbatim from the Calcutta edition".

In recent reports (e.g. Hershkovitz 1966), data taken from literature on *Platanista gangetica* are frequently referred back to the paper published by Roxburgh in 1803, the date of publication of the London edition.

When G. Cuvier (1823) changed the designation of the genus *Delphinus* to *Platanista*, he claimed priority for Lebeck. E. Home (1818), on the other hand, in his paper on the morphology of the teeth of the Gangetic dolphin, referred to Roxburgh as the original author. M. F. Cuvier (1836) who, in nearly all other respects, based his work on the account of his brother (G. Cuvier 1823), expressed a doubt as to whom to attribute the original work. Referring to the paper of Home, he added a footnote at the bottom of page 252 that reads as follows: "T.VII, p. 170, pl. III (édit. de Londres, 1803, in-4°). M. Home dans sa description des dents de ce dauphin, cite le mémoire de Roxburgh comme ayant paru en 1721 dans les mémoires de la société de Calcutta. Ces mémoires paraissaient-ils alors? L'édition de Londres est une copie de celle de Calcutta". "1721" is obviously a printing error.

When John Anderson (1833-1900) first took up his activities in India he was staying with his brother, a doctor and botanist, in the house built in the Botanical Gardens by Roxburgh. On page 418 of the monograph he published in 1878 on *Platanista* and *Orcaella*, Anderson mentioned that Roxburgh claimed to have published the first description of the Gangetic dolphin, but made no further comment on the fact.

A comparison of the two papers of Lebeck and Roxburgh reveals a striking

similitude in the text, both as regards their presentation and the zoological data they contain. Here, I should like to give a brief summary of the lives of the two authors.

William Roxburgh. Born at Underwood, Craigie, Ayrshire, on June 3rd, 1751, William Roxburgh became a distinguished botanist. He studied in Edinburgh under John Cope and it was Cope who procured him an engagement as assistant surgeon on a ship of the East Indian Company. After several voyages to the tropics, he was granted a degree of Doctor of Medicine in Edinburgh and from 1776-1778 worked in the General Hospital in Madras. In 1780, he became full surgeon and a year later took up a post at Cocanada, in the delta of the Godavery River, where he was mainly occupied with applied botany. It was during this period that he undertook his very extensive collection of plants and illustrations of the Indian flora. In 1793 he was appointed Superintendent of the Botanical Gardens of Calcutta but four years later he was forced to return to Scotland on account of ill health. He went back to Calcutta in 1799, but had to leave India again in 1805. His state of health continued to deteriorate and he sought recovery at the Cape and in St. Helena, but in vain. He finally returned to Scotland and died in Edinburgh on February 15th, 1815.

The numerous and very comprehensive studies undertaken by William Roxburgh, some of which were published after his death by Wallich, constitute a valuable contribution to the knowledge of the Indian, and more particularly, of the Bengalese flora (see Lee 1897). He also compiled reports on water insects, silk worms and land winds. The work on the Gangetic dolphin (1801) falls in a period of Roxburgh's life already overshadowed by the outbreak of his serious illness.

Heinrich Julius Lebeck. In spite of extensive investigations in a large number of libraries at home and abroad, I have not been able to uncover any biographical details on the life of Lebeck. The only reference I found to his life was contained in the book of G. Cuvier (1823) who mentioned that he was a "Danish missionary in Tranquebar". However, this piece of information is obviously inaccurate as Gosch (1875), in his book on early Danish zoological literature, describes Lebeck as a German missionary. Furthermore, the biographical lexicon in the royal library in Copenhagen contains no mention of Lebeck.

The descriptions of Lebeck and Roxburgh

It should be pointed out that Roxburgh stresses the discovery of a new species in the title of his work, "An Account of a *New Species* of *Delphinus*", and Lebeck does not. Both descriptions refer to a male specimen from the Calcutta region of exactly the same size (!). What is even more significant is that not only were the measurements quoted in the two papers identical, but in Lebeck's paper British linear measurements and British avoirdupois weights were used. If the original contribution had been German one would logically expect the author to have employed German units. The two reports start with Linnaeus and state that the Gangetic dolphin is a fifth, new species to be added to the four species of dolphins described by Linnaeus. The head, teeth, tongue, eyes, external auditory passages, fins and genitals are described in the same order. Both authors found nematodes and plant seeds in the stomach. Both mention the thickness and strawyellow colouring of the

blubber as well as the fact that dolphins oils are used for medicinal purposes by the natives.

Not only is the order in which the organs are described in the diagnosis of the species identical, but also, whole sentences are repeated word for word.

A comparison of the texts leads to the conclusion that one of the two authors was acquainted with the text of the other before he published his own work. It is also significant that Lebeck mentions a "zweiten mir gezeigten Rüssel eines solchen Tieres"¹ (page 282). I presume that this rostrum could only have been shown to him within the natural science circles of Calcutta, the town where research on the Gangetic dolphin originated with the collections and observations of Roxburgh, Blyth and, later, John Anderson.

Here it is worth while noting that in the British Museum (Natural History) a cast of rostrum Nr. 1884.5.3.1, River Ganges, is exhibited with the label: "the original specimen now in the Museum of the Royal College of Surgeons² was described and figured by Dr. Roxburgh—it exhibits in great perfection the characters of the teeth in aged animals, which are quite different from these of the young". It is tempting to conclude that this is the specimen previously shown to Lebeck.

It is not certain that the "Neue Schriften der Gesellschaft Naturforschender Freunde zu Berlin" was also available in Calcutta in 1801. Certainly no copy of this journal is included in the Indian Museum library to-day. "Asiatick Researches", on the other hand, must have been easily accessible to Lebeck who was living in India, or had lived in India, at about that time.

There is no doubt that Roxburgh made very thorough observations of the Hughly river dolphins, since his house, as Anderson (1878) explained, resembled the bridge of a ship and commanded an extensive view of the Hughly river. Gangetic dolphins still swim in this river to-day as they did in the past. Roxburgh was also interested in hydrobiological problems (water insects) which is further proof of his familiarity with Indian rivers. He was considered an expert responsible for many botanical discoveries and descriptions of Indian plants.

Although he was predominantly a botanist Roxburgh did have the preliminary training as a surgeon so, like Anderson, he would have had the basic knowledge of anatomy that would have made him competent to deal with a dolphin. It is inconceivable to me that a man of his experience would need to copy a report of Lebeck. The contrary is much more plausible. Therefore, I am of the opinion that William Roxburgh, and not H. J. Lebeck, was the first author to describe this interesting species of cetacean, and suggest that in the future publications on the Gangetic dolphin, the species should be referred to as *Platanista gangetica* (Roxburgh 1801).

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¹ "the second rostrum I was shown of such an animal".

² The specimen was destroyed by enemy action during the second world war.

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SUMMARY

The attribution of the original description of *Platanista gangetica* to Lebeck is contested. It is first established that the descriptions of Lebeck and Roxburgh were published in the same year, i.e. in 1801, and the reasons for concluding that the description of Lebeck was copied from that of Roxburgh are set out. It is suggested that Roxburgh be considered the author of the original description of the Gangetic dolphin.

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