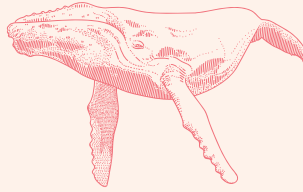


# The Bergen Minke Whale in Naples

– The scientific relationship between Wilhelm Frimann Koren Christie and the Italian natural scientist Stefano delle Chiaje



MARIELVA TORINO

In the Grand Hall of the Zoological Museum of Naples, a skeleton of a minke whale – a *Balaenoptera rostrata* – is exhibited (fig. 1). It is only recently that the history of this whale has been reconstructed. This was the result of research conducted in connection with an extensive biography of the Italian scientist and natural researcher Stefano delle Chiaje.<sup>1</sup> The work revealed interesting documents in the State Archive of Naples and the Bergen Museum archive – documents that, when coupled together, supplement each other.



Fig. 1 |

Stefano delle Chiaje (1794-1860) (fig. 2) was one of the most important natural scientists of his age. Born in Teano, a little town north of Naples, he became the favourite pupil of the scientist Giuseppe Saverio Poli (1746-1825). Delle Chiaje made important discoveries in zoology and anatomy, and is also known for his work in cultivating medicine and botany. He was the first to perform chemical analyses of skeletons from the Pompeii excavations, and is therefore considered the founder of rheumatological paleopathology.

Stefano delle Chiaje was in close contact with the most prominent scientists of his time, including Georges Cuvier (1769-1832) and Alexander von Humboldt (1769-1859). In 1846, he became professor of anatomy at the University of Naples<sup>2</sup> and director of the university's Museo Anatomico. The museum became his most important project, and he was strongly engaged in the task of procuring anatomical material for it, from men and animals, in normal as well as pathological condition (fig. 3).

After delle Chiaje's death in 1860, and as a consequence of the political and personal motives of others, his reputation became the victim of a *damnatio memoriae* (an example of

Fig. 2 | Stefano delle Chiaje (1794-1860)





Fig. 3 |

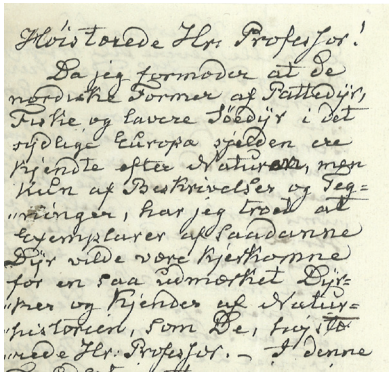


Fig. 4 |

the intentional obliteration of his memory is mentioned at the end of this article). A large amount of laborious archival work still remains to be done in order for delle Chiaje's historical importance to be recognised.<sup>3</sup>

In Bergen, Wilhelm Frimann Koren Christie took the initiative to establish a collaboration between Stefano delle Chiaje and the Bergen Museum in the form of an exchange. Towards the end of 1843, he contacted his cousin Eiler Hagerup Fleischer in Naples and asked him to translate a letter to delle Chiaje.<sup>4</sup> Eiler Hagerup Fleischer (1781-1852) was the Swedish and Norwegian consul in Naples at the time. Himself a contributor to the Bergen Museum, he had been in contact by letters with the institution since 1828. The following year, he sent various gifts to the museum, including copies of wall paintings from Pompeii and, some years later, stone knives that had been found in Pompeii.

Fleischer's translation was sent on 4 January 1844.<sup>5</sup> Christie wrote that he believed that delle Chiaje, as an "excellent cultivator and connoisseur of Natural History", would be interested in acquiring Northern specimens of mammals, fish and more primitive marine animals then unknown in Southern Europe (fig. 4). He therefore sent, as an example, a crate containing 12 'glasses' containing several such animals preserved in spirits, as well as some dried 'Echinodermata' (a collective name for starfish, sea cucumbers, sea lilies, etc.). In return, Christie requested animals from the coast of Italy and Sicily. Christie wrote that, if delle Chiaje was willing to continue the exchange, he would do his best to comply with his wishes. The transportation to Bergen would be taken care of by Fleischer.

Christie was also interested in a work on invertebrates that had been published by delle Chiaje.<sup>6</sup> In exchange, he offered some "rarely found matter", including the foeti of various animals, such as a whale, a recently discovered species of dolphin, a certain species of shark, and a mackerel shark; or the skeleton of a glutton, etc.<sup>7</sup>

It is evident from Christie's letter that *Johan Koren* played an important part in establishing the contact with Naples. Johan Koren (1809-1885) was born in Bergen and had trained to become a doctor in Oslo. He returned in 1842 and, four years later, he was employed by the Bergen Museum as its curator and preparator. His research particularly focused on marine invertebrates.<sup>8</sup> Koren played a major role in the development of Christie's cabinet of naturalia into a substantial natural history museum.<sup>9</sup>

Part of the content of the shipment from Bergen came from Koren's private collection. Attached to Christie's letter was a detailed list of the content, which reveals that 4 of the 12 glasses with animals preserved in spirits came from Koren. Christie therefore requested that whatever delle Chiaje would send to Bergen would be duplicated: one sample for the museum, another for Koren.

Christie's letter initiated the contact between Bergen and Naples. In early April 1844, delle Chiaje answered (fig. 5). Although the crate from Bergen was still passing through customs, he sent some of his books and a number of conches (all in duplicated quantity). Concerning the study of invertebrates mentioned by Christie, delle Chiaje pointed out that he had published a more recent work in seven volumes comprising 173 plates, doubling the material of the former study.<sup>10</sup>

In return, he proposed the same items that Christie had offered in his letter (various foeti, skeleton of glutton, etc.). In addition, delle Chiaje mentioned that he could send a larger, older work on *testacea*, which had been published by his teacher, the great natural scientist Giuseppe Saverio Poli, and completed by himself.<sup>11</sup> Christie eagerly accepted both works, which were promptly shipped to Bergen via consul Fleischer.<sup>12</sup>

During this initial phase, the volume of the exchange between Bergen and Naples remained restricted. A central contributing cause was that, in 1844, delle Chiaje was still not connected with the Museo Anatomico, but with another institution, and was also collaborating with the director of the Zoological Museum, Giosuè Sangiovanni (1775-1849).

In January 1845, Fleischer sent delle Chiaje's regards to Christie, informing him that the Naples scientist was waiting anxiously for the shipment from Bergen. For some reason, Christie didn't react until July, by which time he was prepared to dispatch the skeleton of a fetus of the recently discovered dolphin, mentioned earlier. In addition, he was also ready to offer the skeleton of a Norwegian sei whale (*balaenoptera borealis*), measuring 28 cubits (ca 16 m). As these were considered to be scientific material, Christie sought to find an economically reasonable form of transport.

In the following year, the exchange became more substantial. As mentioned above, delle Chiaje was awarded the chair of anatomy at the university in 1846, as well as the position of director of the Museo Anatomico. His ambition was for this

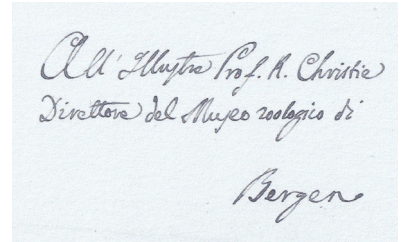


Fig. 5 |

museum to become a central scientific institution, with the ability to help researchers from other countries and to give teachers the opportunity for hands-on education.

From delle Chiaje's point of view, it was not possible to acquire a deeper understanding of human anatomy without studying comparative anatomy. This was the reason behind his efforts to provide the museum that he directed with a rich selection of exhibits, ranging from animal to human anatomy, and from pathology to teratology.<sup>13</sup>

It goes without saying that delle Chiaje wanted to have his collection enriched by a whale from the North. In May 1846, he asked Christie to send the skeleton of the dolphin (that had been offered the year before) without delay. But the space available in the Museo Anatomico was restricted, so he was forced to turn down Christie's offer of a 16 m long sei whale. Instead, he contented himself with a *small* whale (*balena piccola*), which could be exhibited without difficulty. This would eventually be complemented with the addition of skeletons of little-known mammals, reptiles and birds.

Delle Chiaje agreed that, as soon as he was informed of the price, he would send (via Fleischer) either his work on the 'Invertebrati' in 7 volumes or Poli's work on 'Testacea'. For the time being, he instead sent a copy of his '*Notomia comparata*' to Bergen.<sup>14</sup>

In early September 1846, Christie was back in Bergen from a three-month excursion to Stryn, Sønnfjord and Nordfjord, where he had been searching for new objects for the museum. On 3 September, he arranged for the dispatch to Naples of the items he had promised earlier: the skeleton of the recently discovered dolphin<sup>15</sup> and a foetus of the same species preserved in alcohol, together with the 7.8 m skeleton of a minke whale (*balaenoptera rostrata*). The value of the shipment was estimated at 80 to 120 *speciedaler* (spd) for the whale, 20 to 30 spd for the skeleton, and 10 to 15 spd for the foetus. Transportation to Naples, in two large crates, was to be carried out on the ship *Therese*, commanded by Captain E. Oxholm (fig. 6), at the modest price of 10 spd.

Shortly after this had been sent, it dawned on Christie that he had failed to include part of what he had offered to delle Chiaje. He therefore hurried to send a shark (*spinax niger*) and a foetus of the same, as well as a rare shark parasite (*alepas squalicola*). These were shipped to Fleischer's address



on 22 September by the schooner brig *Nordstjernen*, captained by Jonas Petersen.

A letter sent from Fleischer to Christie in February 1847 reveals that the ship *Therese* had had an accident near Lisbon, and had been forced to remain there for several weeks for repairs. It did not reach Naples until December, at which time the two crates and three bottles with preserved objects were finally delivered to delle Chiaje. It was a bitter disappointment to the scientist to realise that all the perishable material had decomposed and had to be thrown away.

The skeleton of the minke whale, however, was intact, but, because of a chemical reaction, it had acquired a black hue. It was only after undergoing a lengthy process of rubbing and scraping by the museum staff that it returned to a satisfactory condition.<sup>16</sup> The cause of the deplorable condition was that the skeleton had not been duly cleansed of organic matter before it was dispatched, together with the length of the voyage. On top of all this, the captain, for want of space, had placed the crates on the ship's deck, where they had been exposed to rain and wind. This explains why the cost of shipping – for which delle Chiaje, notwithstanding his disappointment, had to pay – was so low.

In February 1848, delle Chiaje complained to Christie about the condition of the skeleton he had received and the loss of the organic matter.

In Naples, the skeleton had been cleaned, through a laborious

Fig. 6 |

and foul-smelling process. The purchase price, amounting to 180 *ducati*, had been paid in full by delle Chiaje (the University of Naples only covered the transport and packing costs, which totalled 52.80 *ducati*).<sup>17</sup> He decided to donate the skeleton to the university, and was granted permission to affix a plaque to its cranium with the inscription “Dono di Stefano delle Chiaje” (Donated by . . . ). Information about the donation would be included in the catalogue of objects exhibited in the university’s Anatomical Museum.

The transfer of the Norwegian minke whale to Naples was the result of a fruitful collaboration between the scientist and the museum founder – a collaboration that only ended with the death of Christie on 10 October 1849.

On 29 May of the following year, his brother, Werner Hosewinckel Christie, sent a letter to consul Fleischer explaining the many changes that had been introduced in the management of the museum after the founder’s death. He promised to continue the latter’s work.

But the collaboration of Stefano delle Chiaje and the Bergen Museum had come to an end.

The discovery of the Naples minke whale and the removal of the label with the donor’s name

As mentioned in the introduction to this article, a skeleton of a minke whale is exhibited in the Grand Hall of the Museo Zoologico in Naples. It had been transferred from the Gabinetto di Anatomia in 1950, and had been restored and reassembled in a dynamic position in 1996. The skeleton had no label or card to explain it, and there were no references to it.

In the 1868 catalogue of the zoologist Paolo Panceri, the skeleton is listed as no. 139 with the following information: “Balaenoptera rostrata, length 7.35 m”.<sup>18</sup> This is all.

Forty years later, in 1908, the whale was recorded by another zoologist, Francesco Saverio Monticelli. As there was no information about its donor or provenance, he assumed that the skeleton had come “from the old collection of the Museum of Pathological Anatomy”.<sup>19</sup> Like Panceri, Monticelli knew nothing about the exhibit’s Northern origin, nor of delle Chiaje’s donation.

A careful examination of the whale’s skull revealed two small holes of about 7 mm diameter and with a distance of 45 cm,



which had since been filled in but were still visible on the upper surface (on the lower surface, they had not been filled in) (fig. 7). Obviously, the holes had served to attach a plaque at least 45 cm wide, which had later been removed. The plaque must have been the one that delle Chiaje, according to the documents in the Naples State Archive, had intended to affix to his donation, with the inscription “Dono di Stefano delle Chiaje” (see above). Consequently, we can affirm *that the skeleton now exhibited in the Salone Maggiore of the Museo Zoologico of Naples is the same as the one that was sent from Bergen in 1846.*

The removal of the plaque can be dated with a high degree of probability. It must have taken place in the time between delle Chiaje’s death on 22 July 1860 and the arrival of Professor Paolo Panceri in Naples in 1861, when he took up the post of teaching comparative anatomy and created the museum related to his discipline. If the plaque had been present then, Panceri would undoubtedly have retained it, and he would have included the donor’s name in his catalogue of 1868.

As stated in my biography of Stefano delle Chiaje, the removal can be attributed with certainty to Professor Achille Costa (1823-1898), who was appointed director of the Museo Zoologico after delle Chiaje, and who, because of old personal and political conflicts, was strongly opposed to him.<sup>20</sup> By this act, Costa also deleted the memory of the fruitful relationship between the Bergen Museum and the Anatomical Museum of Naples, which had been created and nurtured by the scientific cooperation of two remarkable personalities: Stefano delle Chiaje and Wilhelm Frimann Koren Christie.<sup>21</sup>

Fig. 7 |

Fig. 10 |





## Appendix 1: W.F.K. Christie's whale studies

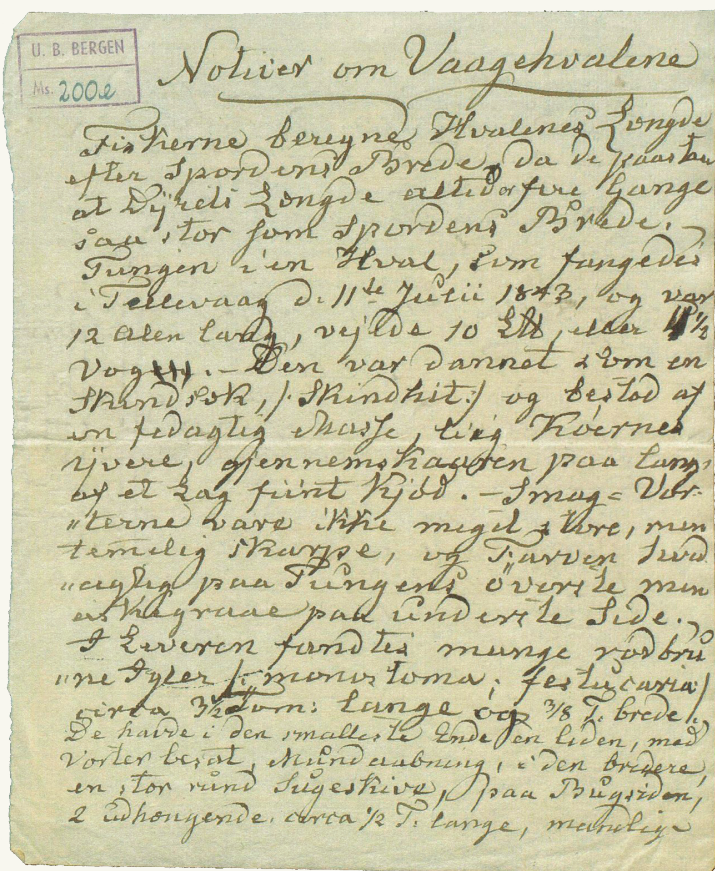
Among the Christie papers in the Bergen University Library, there are several indications that he had been interested in whales and had collected information about captured samples. According to Arne Kalland, who has studied this subject, Christie began collecting skeletons and foeti in the mid 1830s. Apparently, he was particularly fascinated by pilot whales, but minke whales also interested him.

Christie noted his observations on paper, and four of the ten existing small manuscripts are devoted to "Vaagehval" (minke whale) and "Foster af Vaagehval" (foetus of . . .). One of the notes is shown in fig. 8. It describes an animal that had been captured at Telavåg on 11 July 1843, and that was obviously dissected. Inside the liver, several reddish brown "leeches, 3½ inches long and ⅜ inch thick, with a mouth at the narrower end and a round sucker at the other" had been found.

The manuscripts about whales date from 1844-1848, which is exactly the period during which Christie's contact with delle Chiaje developed. Whether any of the notes could be related to the whale whose skeleton was sent to Naples is an open question.

Literature: Arne Kalland: «Wilhelm F.K. Christie og hvalene», *Hval og hvalfangst på Vestlandet 1600-1910* (Oslo 2014), p. 305-308.

Fig. 8 |



## Appendix 2: Publications by Stefano delle Chiaje in Bergen University Library

A considerable number of books and treatises published by delle Chiaje can be found in Bergen University Library today. They are clearly the fruit of his cooperation with Christie, and must have been sent to Bergen in the 1840s. The list below contains 10 titles, comprising 21 volumes. The first item, in Latin, was begun by Giuseppe Saverio Poli (1746-1825) and completed by delle Chiaje with a third volume. The rest of the books are entirely by delle Chiaje (Fig. 9a-d).

1. Giuseppe Saverio Poli [Joseph Xav. Polius]: *Testacea Vtriusque Siciliae eorumque Historia et Anatomia*, Parma 1791-1827 (3 text vols bound in 4, and 3 vols of plates)
2. *Osservazioni anatomiche e fisiologiche sui molluschi del Cono rustico e...* [1827]
3. *Opuscoli fisico-medici*, Naples 1833 (incomplete)
4. *Dissertazioni anatomico-patologiche*, Naples 1834
5. *Enchiridio di tossicologia teorico-pratica*, Naples 1835
6. *Istituzioni di Anatomia Comparata*, Naples 1836
7. *Osservazioni anatomiche su l'occhio umano*, Naples 1838
8. *Ricerche anatomico-biologiche sul proteo serpentino*, Naples 1840
9. *Descrizione e notomia degli animali invertebrati della Sicilia Citeriore*, Naples 1841-1844 (5 vols)
10. *Miscellanea anatomico-patologica*, Naples 1847 (2 vols)

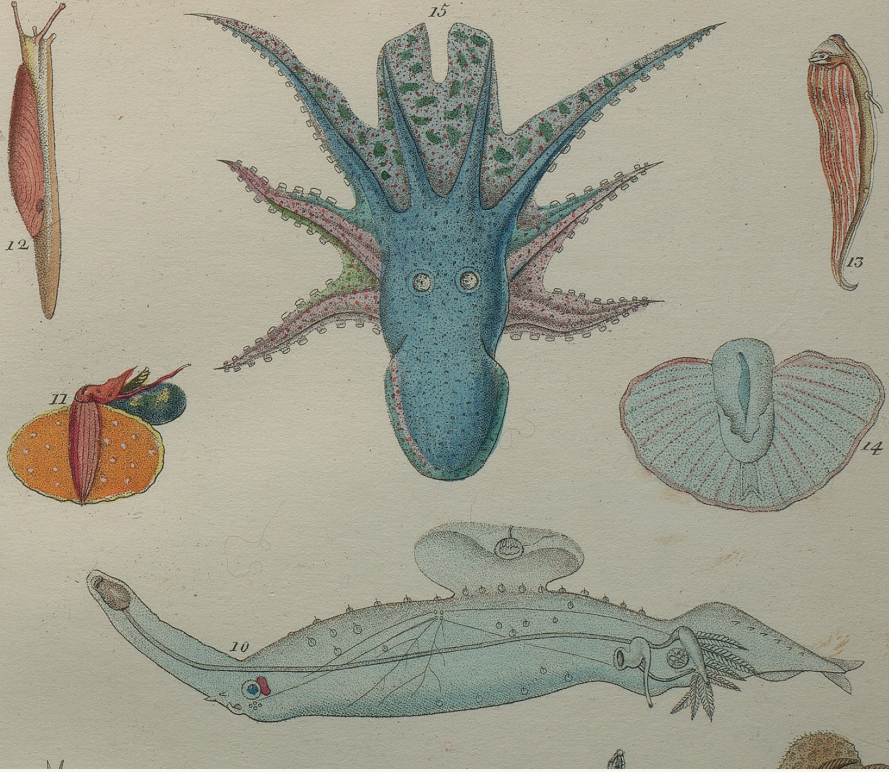
Fig. 9a, b, c, d |



b

III. Malacozoï.

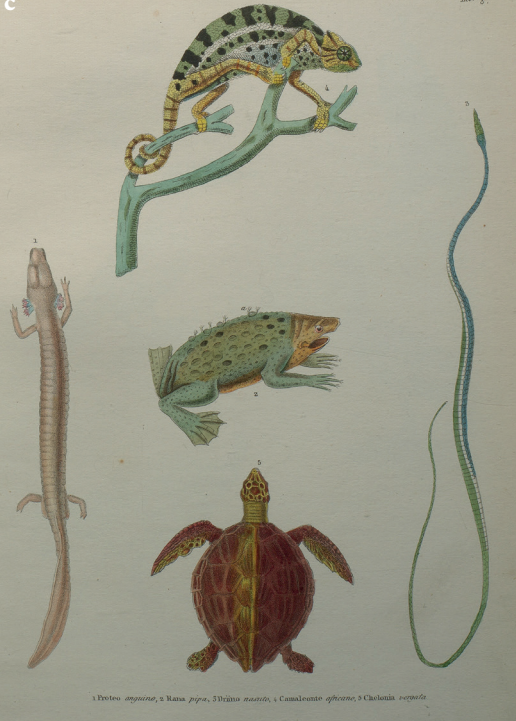
Tav. 5



17

c

Pl. 3.



1 Proteus anguinus, 2 Rana pipiens, 3 Urotaea stans, 4 Camaleonte sphenoc, 5 Chelonia mydas.

d

PL.



0. We would like to thank Professor Henrik von Achen, Sonja Marie Innselset, Tor Eigil Røssaak, Professor Maria Rosaria Ghiara and Dr. Roberta Improta for their help with the research; and Dr. Ruth Kerr for translation from Italian to English.
1. Marielva Torino: *Stefano delle Chiaje (Teano 1794 - Napoli 1860): La damnatio memoriae di uno scienziato: Un caso di spoils system dell'Italia unita* (2 vols, Naples 2016, Alessandro Polidoro Editore). Ref. hereafter: «Torino 2016».
2. It is the same university as today's Università degli Studi di Napoli Federico II. In delle Chiaje's time, it was the «Regia Università degli Studi di Napoli».
3. Marielva Torino: «Stefano Delle Chiaje: un medico naturalista, un naturalista medico dimenticato. La sua balena e il capodoglio», in: *Atti del Bicentenario del Museo Zoologico di Napoli*, 1813-2013 (Naples 2015, p. 125-146).
4. [http://www.snln.no/nbl\\_biografi/Wilhelm\\_Frimann\\_Koren\\_Christie/utdypning](http://www.snln.no/nbl_biografi/Wilhelm_Frimann_Koren_Christie/utdypning). Copies of Christie's letters to Fleischer are kept in the Bergen Museum archive, in Bergen, with many originals kept in the Archivio di Stato di Napoli. The letters from delle Chiaje to Christie, with Fleischer's translations, are kept in the Bergen Museum archive. We regard it as unnecessary to provide references and dates for every individual letter used or mentioned further in this article.
5. Fleischer's translation including the long enclosure is quoted in Torino 2016, p. 710-713.
6. Stefano delle Chiaje: *Memorie sulla storia e notomia degli animali senza vertebre del regno di Napoli* (Naples 1822-29). (Christie quotes the entire title correctly in his letter.)
7. Christie uses the Latin terms: *balaenoptera* (whale), *delphinus leucopleurus nova species Rasch*, *spinax niger* (a shark), *squalus cornubicus* (mackerel shark), and *mustela gulo* (glutton).
8. Arne Kalland: *Hval og hvalfangst på Vestlandet 1600-1910* (Oslo 2014), p. 308.
9. Bjarne Meidell in *Norsk Biografisk Leksikon* 2002.
10. The work in question is *Descrizione e notomia degli animali invertebrati della Sicilia Citeriore* (Naples 1841-1844); it is available in the Bergen University Library (hereafter 'UBB'), see Appendix 2, no. 9.
11. *Testacea Utriusque Siciliae* (in Latin), by Giuseppe Saverio Poli and Stefano delle Chiaje (Parma 1791-1827). The copy in UBB has 4 vols of text and 3 of plates. See Appendix 2, no. 1.
12. Napoli, Archivio di Stato, Ministero Pubblica Istruzione, 284 II.
13. *Teratology* is the particular part of embryology dealing with deformities in foeti.
14. = *Istituzioni di anatomia comparata*, 3 vols (Naples 1836). Present in UBB. See Appendix 2, no. 6.
15. H. Rasch: *Delphinus leucopleurus: Nova species* (Christiania 1843).
16. Napoli, Archivio di Stato, Consiglio Generale Pubblica Istruzione, b. 3072.
17. Delle Chiaje's letter to the Rector of the University is given here verbatim, as a key document: *Signor Rettore, con rapporto del 29 gennaio decorso io Le dava contezza di aver permutato col Prof. Christie Direttore del Museo Zoologico di Bergen in Norvegia un esemplare dell'opera del Cav. Poli sui Testacei delle Due Sicilie da me continuata e della mia operetta intorno alla Anatomia degli animali invertebrati della Sicilia Citeriore ambedue con figure colorite del costo di circa ducati centottanta con uno scheletro grezzo di balenottera rostrata di equal valore. S.E. il Ministro Santangelo me ne fece ottenere la franchigia doganale e mi permise di conservarlo nel Museo anatomico sinchè non ne avessi risoluto il destino. Tale scheletro qui giunse appena spolpato e per ridurlo ad una conveniente bianchezza si è dovuto tenere per molti mesi a macerare su' contigui lastrici del Museo Mineralogico e da un bimestre circa si è ripulito dagli impieghi del Museo e da me. Ora intendo farne dono al citato Stabilimento, implorando*

- da S.M. di rimanere perennemente scritto sul teschio di detto scheletro: Dono di Stefano delle Chiaje e di notarmi pure nel catalogo ragionato della Collezione dei preparati esistenti nel Museo Anatomico della Regia Università degli Studi mentre durante la gestione del corrente anno procurerò di risparmiare i ducati cinquantadue e grani ottanta già sborsati al Console di Svezia Fleischer ed al preparatore Henke per suo trasporto ferro e ligatura dal mensuale assegnamento del Museo suddetto e che dal mio predecessore pagavasi per pura e semplice manutenzione delle preparazioni ivi allagate. Il Direttore del Museo Notomico Stefano delle Chiaje* (Archivio di Stato di Napoli, Consiglio Generale Pubblica Istruzione, b. 3072)
18. P. Panceri: *Catalogo sistematico del Gabinetto di Anatomia comparata delle R. Università degli Studi di Napoli* (Naples 1868), p. 8: «n° 139. Balaenoptera rostrata Fabr. Sch», (note: «Individuo che misura in lunghezza m. 7,35.»)
19. F.S. Monticelli: «Per la storia di un Cetaceo arenato sulle coste d'Ischia», *Annuario del Museo Zoologico*, Nuova serie, b. II. n. 13 (1906-1908), p. 2: «sotto il n° 139 (Collezione osteologica) è registrato uno scheletro di Cetaceo misurante metri 7,35 (v. nota) determinato come di Balaenoptera rostrata Fabr. senza indicazione di data di preparazione o di acquisto. Il che vuol dire (...) che esso proviene dalle vecchie collezioni del Museo di Anatomia patologica».
20. Torino 2016 (see note 1), p. 1054f.
21. I owe particular thanks to Professor Maria Rosaria Ghiara for granting the permission to study, photograph and publish the exhibits in the Museo Zoologico di Napoli, and to Dr. Roberta Improta, Technical Director of the Museo Zoologico di Napoli.

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