

THE HISTORY OF THE CAST SKELETON OF
DIPLODOCUS CARNEGII HATCHER, 1901,
AT THE MUSEO DE LA PLATA, ARGENTINA

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ABSTRACT

Diplodocus carnegii Hatcher, 1901, is a sauropod dinosaur that was originally recovered in the late 19th century in the Upper Jurassic of North America. The large amount of bones recovered permitted the reconstruction of the original skeleton at the Carnegie Museum in Pittsburgh, Pennsylvania, United States of America. A series of casts of the specimen were made and donated by Andrew Carnegie to different countries in Europe and Latin America. The cast of *D. carnegii* mounted in 1912 at the Museo de La Plata was one of the nine replicas donated by Carnegie. The history of the discovery, the trip to Argentina by Carnegie Museum personnel, and the mounting of the cast skeleton are related in this contribution.

KEY WORDS: Andrew Carnegie, dinosaur, Diplodocidae, donation, Sauropoda, Upper Jurassic, William Holland

INTRODUCTION

Together with *Tyrannosaurus* Osborn, 1905, *Diplodocus* Marsh, 1878, is one of the world's most popular dinosaurs. Both taxa are icons. This word comes from the Greek 'eikon,' which means 'image.' It means that an icon represents something. *Tyrannosaurus* is considered an icon because it is one of the largest carnivorous dinosaurs ever found. *Diplodocus* is also considered an icon for its colossal size. Nevertheless, it is not just its size that grants *Diplodocus* its iconic status: it is its unique history that unfolded roughly a century ago.

Diplodocus carnegii Hatcher, 1901, is one of the four valid species of the genus, together with *D. longus* Marsh, 1878, *D. hayi* Holland, 1924, and *D. hallorum* (Gillette, 1991) (Upchurch et al. 2004). It was discovered in 1899 during an expedition carried out by the Carnegie Museum to the Upper Jurassic Morrison Formation of Wyoming, United States of America. This discovery, together with other *Diplodocus* finds in subsequent years, allowed the reconstruction and mounting of a complete skeleton in the North American institution (McIntosh 1981; Barrett et al. 2010).

After 1900, a total of eleven replicas of *D. carnegii* were made (including those donated after Carnegie's death), financed by the steel magnate Andrew Carnegie and donated to kings and presidents throughout Europe and Latin America. These donations were part of the philanthropic work through which Carnegie wished to spread goodwill throughout different countries around the world. The first cast of the skeleton was donated to King Edward VII of England in 1905. One of the other countries to receive a cast was Argentina, in 1912.

This kind of donation, however, required a formal request from each head of state and particular logistics related to traveling and mounting. This contribution relates these events, from the discovery of the beast to its mounting at the Museo de La Plata, including the relocation of the La Plata cast to its current location in the museum.

Institutional abbreviations.—AMNH, American Museum of Natural History, New York, New York, U.S.A.; CM, Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, U.S.A.; USNM, National Museum of Natural History, Smithsonian Institution, Washington, District of Columbia, U.S.A.

MATERIAL AND METHODS

Archival data for this contribution included photographs and correspondence between personnel of Museo de La Plata and the Carnegie Museum. In this regard, some photographic material and correspondence as well were taken with permission from the archives of both institutions and also from the Andrew Carnegie online Archive at Carnegie Mellon University (<http://www.accesspdr.org>). To cite correspondence obtained from the Carnegie Museum of Natural History Archives, we followed the archive's Citation Guide: (<http://www.carnegiemnh.org/science/default.aspx?id=10070>)

THE DISCOVERY AND EARLY HISTORY OF
DIPLODOCUS CARNEGII

Although *D. carnegii* is considered the most popular species of the genus, it was not the first *Diplodocus* species to

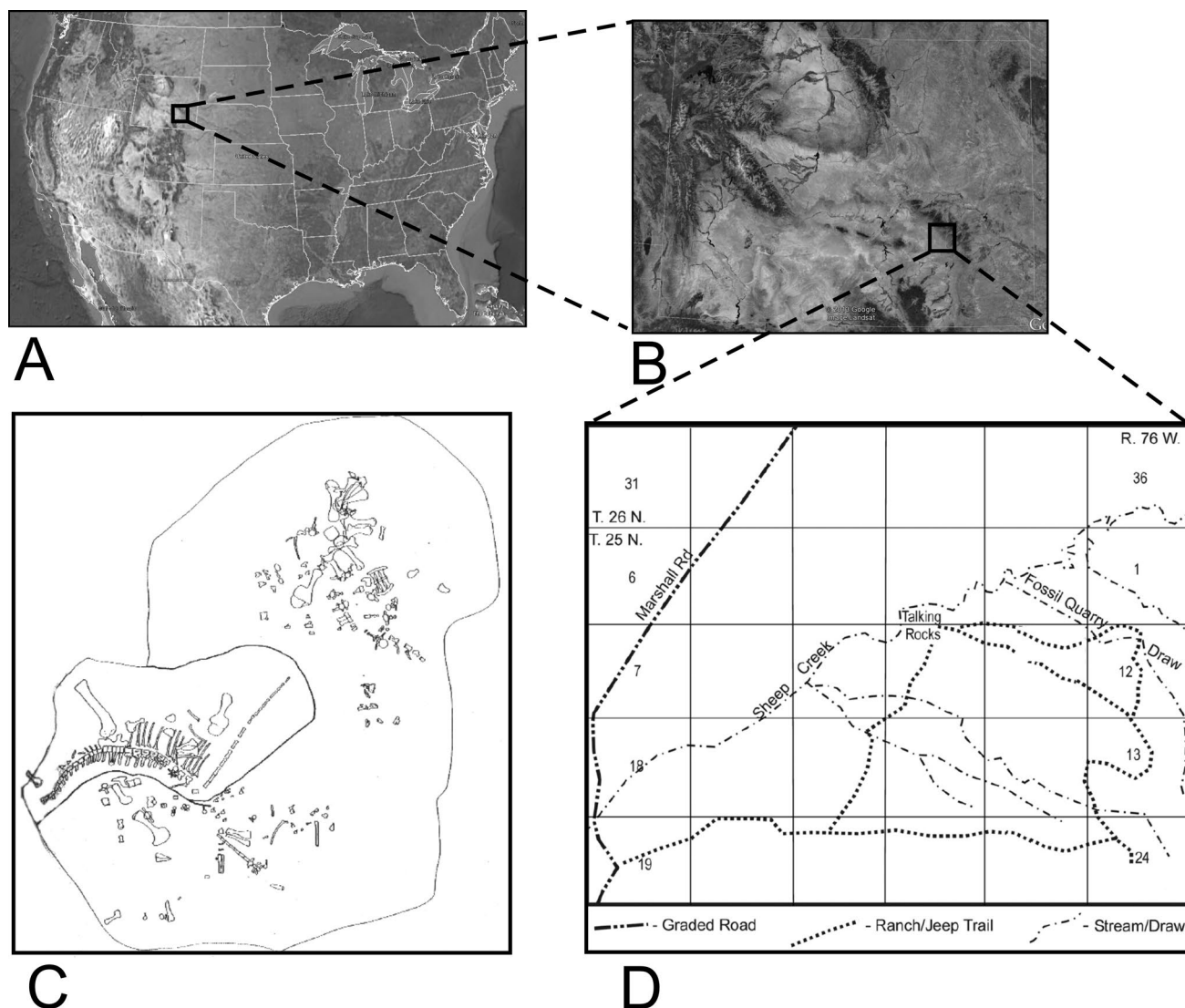


Fig. 1.—Maps showing the discovery site of *Diplodocus carnegii*. **A**, United States of America; **B**, Sheep Creek in the state of Wyoming; **C**, detail of the distribution of bones of *Diplodocus*; **D**, ‘Quarry D’ at Sheep Creek. **A**, **B**, adapted from Google Earth®; **C**, adapted from Hatcher (1901); **D**, adapted from Brezinski and Kollar (2008).

be discovered. The first remains of *Diplodocus* were found in 1877 by the lawyer and naturalist Benjamin Mudge and the paleontologist Samuel Wendell Williston, in Upper Jurassic outcrops of Cañon City, Colorado, United States (Marsh 1878). Those remains were described in 1878 by Othniel Charles Marsh of Yale University, in the same year that Marsh proposed the taxonomic name Sauropoda to encompass all herbivorous dinosaurs that walked on four legs and that had long necks and disproportionately small skulls. Marsh named the species *Diplodocus longus* on the basis of remains of the hind limb and tail. The name *Diplodocus* means ‘double beam’ in reference to the particular two-pronged morphology of the posterior hemal arches.

The species of interest here, *D. carnegii*, was discovered in 1899 by the preparator-in-chief of the Vertebrate

Paleontology Department of the Carnegie Museum, Mr. Arthur Coggeshall, at ‘Quarry D’ of Sheep Creek in southeastern Wyoming, in an exposure of the Upper Jurassic Morrison Formation (McIntosh 1981) (Fig. 1). The discovery was made on July 4 – Independence Day in the United States.

The nearly complete skeleton was exhumed by Coggeshall and a crew composed of J.L. Wortman, W.H. Reed, and W.C. Reed. The specimen was deposited in the Carnegie Museum of Pittsburgh under the collection number CM 84, and constitutes the holotype of the species. One year later, another specimen (the paratype, CM 94) was found by O.A. Peterson and C.W. Gilmore at the same site and stratigraphic level as the holotype (McIntosh 1981; Pérez García and Sánchez Chillón 2009). The description and

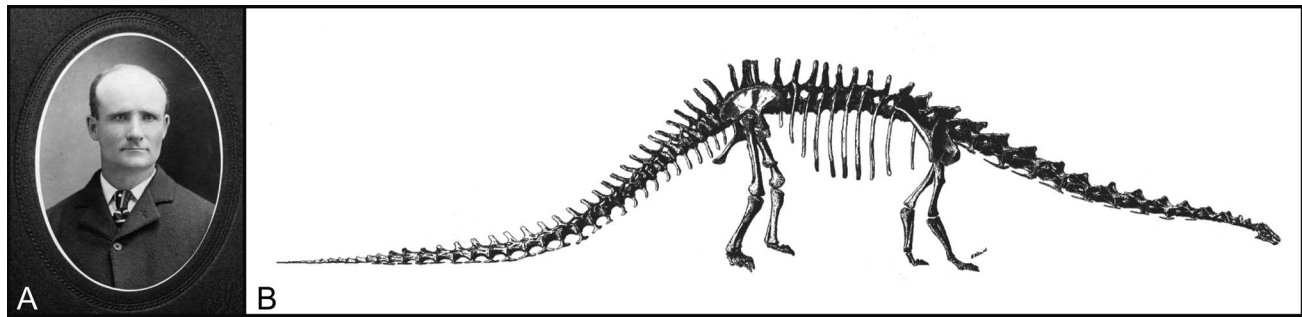


Fig. 2.—Publication of *Diplodocus carnegii* (informally known as ‘Dippy’). **A**, John Bell Hatcher (“Hatcher.” Date unknown. Item No. 1035. Black-and-white print. Vertebrate Paleontology Photographs. Section of Vertebrate Paleontology. Carnegie Museum of Natural History Archives); **B**, reconstruction of ‘Dippy’ (adapted from Hatcher 1901).

naming of the species was completed by John Bell Hatcher in 1901 (Fig. 2A). The composite skeleton mounted at the Carnegie Museum and popularly known as ‘Dippy’ was composed mainly of specimen CM 84 (cervical, dorsal, sacral, and anterior caudal vertebrae, ribs, left scapula and coracoid, right ilium, part of the left ilium, pubes, ischia, right femur, sternal plates, and putative clavicles) (Fig. 2B). Additionally, this partial skeleton was completed with remains of other specimens: CM 94 (middle caudal vertebrae, right scapula and coracoid, right tibia, fibula, and

pes), and CM 307 (posterior caudal vertebrae). Specimens CM 662 and USNM 2673 were used to model the skull, whereas CM 662 was used to model the right forelimb. The manus were based on specimen AMNH 965 (which is now referred to *Camarasaurus* Cope, 1877). Finally, specimens CM 21775 (now referred to *Camarasaurus*) and CM 33985 were used to model the left forelimb and the left fibula and pes, respectively (Hatcher 1901; McIntosh 1981).

William Jacob Holland (Fig. 3A), then director of the

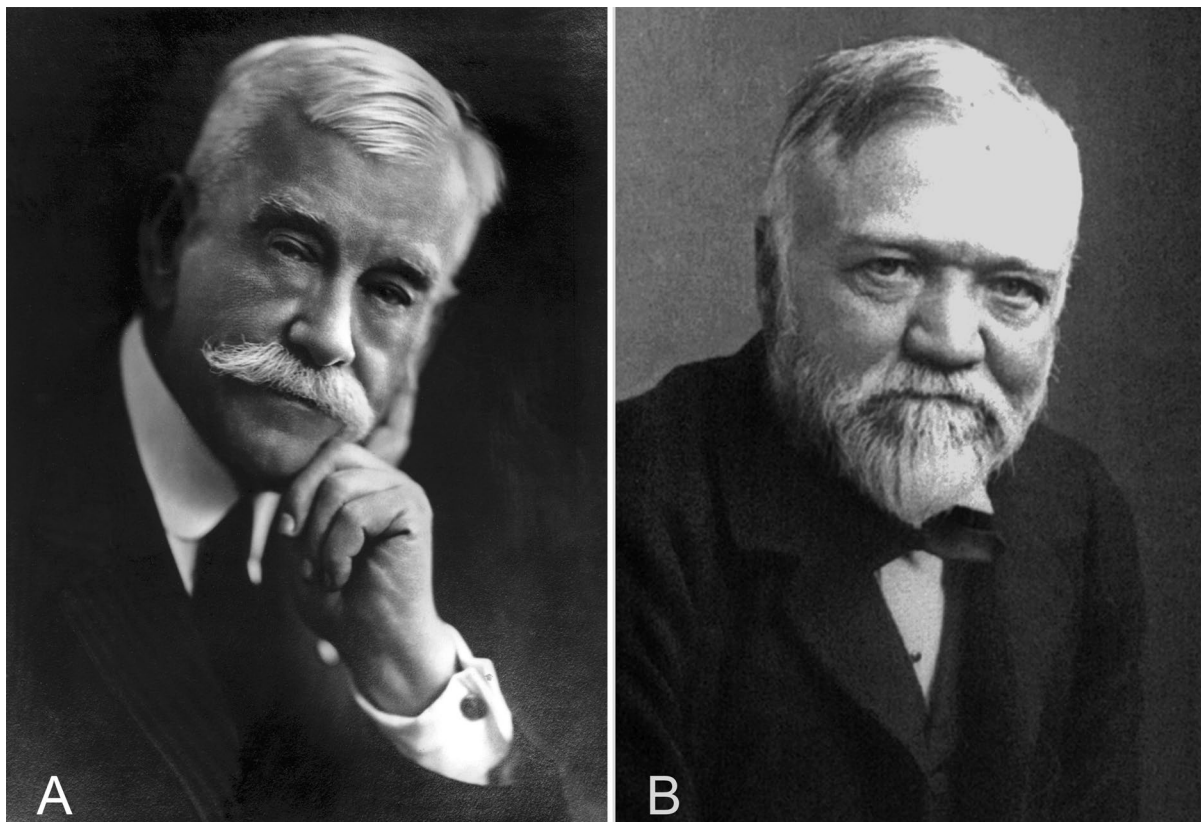


Fig. 3.—Persons associated with the Carnegie Museum in the late 19th and early 20th centuries. **A**, William Jacob Holland (http://www.carnegiemnh.org/uploadedImages/CMNH_Site/Press_Room/Graphics/Historic/HOLLAND.jpg); **B**, Andrew Carnegie (http://www.carnegiemnh.org/uploadedImages/CMNH_Site/Press_Room/Graphics/Historic/carnegie_portrait_leaning.jpg).

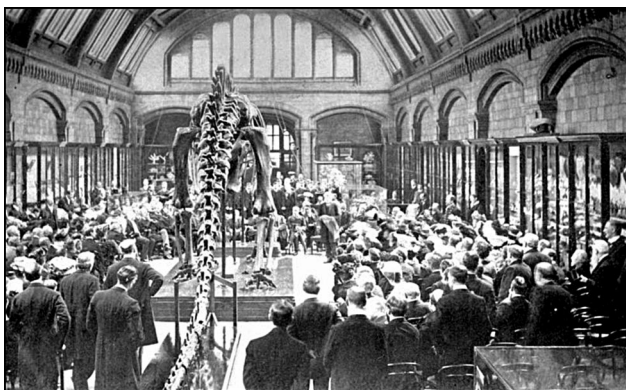


Fig. 4.—Inauguration of the exhibition of ‘Dippy’ at the British Museum of Natural History, London, in 1905 (Adapted from Barrett et al. 2010).

Carnegie Museum and an amateur artist, made a sketch of the skeleton of *Diplodocus* and sent it to Andrew Carnegie (Fig. 3B)—who had financed the excavations—at his castle, Skibo, in Sutherland County, Scotland. The drawing was placed on the wall of one of the rooms of the castle. King Edward VII of England, a friend of Carnegie, saw the sketch and asked the tycoon to give him a specimen for the British Museum of Natural History in London (now Natural History Museum). Carnegie wrote to Holland to convey the King’s wish; however, Holland explained the extreme difficulty of discovering a new specimen. Such a task could take months or even years. As an alternative, Holland proposed to Carnegie to make a life-sized replica of *D. carnegii* to be given to the King (Holland 1913).

In this way, the British Museum of Natural History became the first institution to receive a cast of *D. carnegii* donated by Andrew Carnegie. The exhibition was inaugurated on Friday, May 12, 1905 (Holland 1913; Barrett 2005) (Fig. 4). But Carnegie’s generous act was far from his only one. He spent most of his adult life (and fortune) on philanthropic work, particularly endeavors related to culture and science. Among other institutions, Carnegie founded public libraries, educational foundations, and newspapers, not only in the United States but also in other regions of the Americas and Europe. In this regard, Carnegie’s generosity, in the form of *Diplodocus* replicas, touched many other museums, including the Royal Museum in Berlin, Germany, and the Natural History Museum in Paris, France, in 1908; the Imperial Museum in Vienna, Austria, and the Museum of Paleontology in Bologna, Italy, in 1909; the Imperial Academy of Science in St. Petersburg, Russia, in 1910; the Museo de La Plata, Argentina, in 1912; the Museo Nacional de Ciencias Naturales, in Madrid, Spain, in 1913, and the Natural History Museum in Mexico City, in 1928. This last gift was bestowed by Mrs. Louise Whitfield Carnegie, his widow (Teruggi 1963). After that *Diplodocus* replicas were given to Munich, Germany, in 1934, but never erected, and to the Utah Field House of Natural History, Vernal, Utah, U.S.A., in 1952 (Rea 2001).

THE OFFICIAL REQUEST, THE TRIP TO BUENOS AIRES, AND THE MOUNTING OF *DIPLODOCUS CARNEGII* AT THE MUSEO DE LA PLATA

Many museums in Europe and Latin America benefitted from the donation of a cast of *D. carnegii*. In return, some of those museums gave Carnegie a gift, as in the case of King Alfonso XIII who sent a portrait of himself to Carnegie, acknowledging the donation to the Museo Nacional de Ciencias Naturales, Spain (Pérez García and Sánchez Chillón 2009). The gift of a *Diplodocus* cast, however, could only be requested through an official request by the president or highest authority of the country in question. Because of this, a first request made in 1911 to Andrew Carnegie by the United States ambassador to Argentina, Charles H. Sherrill, was rejected because it did not follow this protocol. Nonetheless, Carnegie indicated to Sherrill that, if he could obtain a formal request with the signature of the Argentinean president, he would consider it.

“I have so many applications for copies of that monster... that only the request from the head of the state will be considered. Under these conditions I have given copies to France, Germany, Russia, Austria and Italy and have received acknowledgements from the head of each of the states, which I highly prize. I should not like to break the rule but no doubt you can easily have the President sign an application which you can prepare...” (Andrew Carnegie. March 21, 1911. Andrew Carnegie Correspondence Collection. Carnegie Mellon University Archives. Pittsburgh PA.)

In November of that year, Argentinean president Dr. Roque Saenz Peña communicated to Andrew Carnegie his request to have a replica of *D. carnegii* exhibited in his South American country. His request was accepted, and on July 1, 1912, 34 boxes containing the cast of the animal and weighing about 10,000 pounds (about 5,000 kg) were sent to La Plata on the S.S. ‘Sallust’ (William J. Holland. ‘S.S. Sallust.’ May 23, 1912. William J. Holland Papers. Section of Vertebrate Paleontology. Carnegie Museum of Natural History Archives) (Fig. 5A). The individuals that would be in charge of mounting the replica were, as was the case for other museums, Dr. William Holland and Mr. Arthur Coggeshall. They sailed from Brooklyn to South America on August 20, 1912 on the ship ‘Vasari’ (Holland 1913) (Fig. 6). The vessel was built by Sir Raylton Dixon & Co. Ltd. at Middlesbrough, England, and had a service called ‘Lamport & Holt Line’ that linked New York, Brazil, and Río de La Plata.

After stops in various cities along the coast of Brazil and a brief stop in Montevideo, Uruguay, the ‘Vasari’ finally arrived in Buenos Aires harbor at the end of September. The Argentinean welcome committee consisted of Dr. W. J. Hussey, director of the Observatorio Astronómico (*Astronomic Observatory*) at La Plata, and researchers of Museo de La Plata: Dr. Santiago Roth, who was Chief of the Departamento Científico Paleontología de Vertebrados, between 1895 and 1906, and Dr. F. Herrero-Ducloux.

May 23, 1912.

Messrs. Busk & Daniels,
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I observe that you have not answered one or two questions which I asked in my previous letter as to the proper manner of addressing the goods here. Would the following be a correct consignment label: "Consigned, Busk & Daniels, Lamport & Holt Line, SS."Sallust", Pier 8, Brooklyn." ?

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Yours very truly,

Director Carnegie Museum.

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NET LBS	9000
VALUE	\$1000.00

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1. IT IS MUTUALLY AGREED that the ship shall have liberty to call at or without ports, to call at port or ports as aforesaid, to deviate or call at any other port or ports in all instances to deviate for the purpose of saving life or property; also that the carrier shall have liberty to convey the goods in casks, lighters, carts or other conveyances, to and from ships at the risk of the goods at the ports.

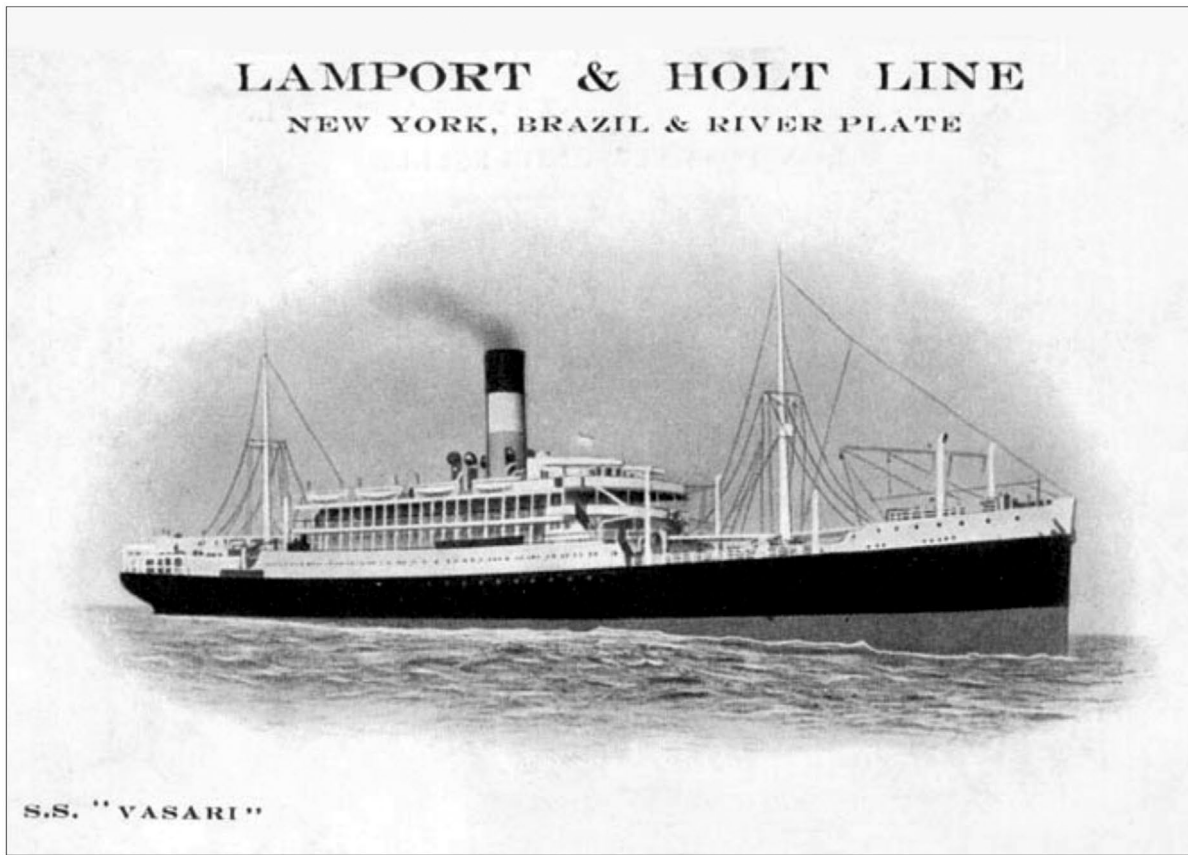
2. ALSO, that if the ship is prevented by Quarantine from reaching her destination, or making due delivery of the goods, or is detained at Quarantine, the goods may be forwarded without previous notice, discharged into docks, warehouses, banks, crafts or lighters, at the risk and expense of shippers, owner and consignee, all and any of them, and such discharge shall be deemed a full and final discharge of the said goods and cargo.

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DESTINATION
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 DE LA PLATA
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 BUENOS AYRES

C

Fig. 5.—Correspondence and documents regarding the shipment of the plaster cast of *Diplodocus* to Museo de La Plata. A, Letter from W.J. Holland to 'Lamport & Holt Line' in which the S.S. 'Sallust' is chosen for the cast shipment; B, Document with the detail of the cargo shipment in charge of 'Lent Traffic Co'; C, Document of the 'Lamport & Holt Line' with detail of the weight, amount of boxes, and destination of the cast.



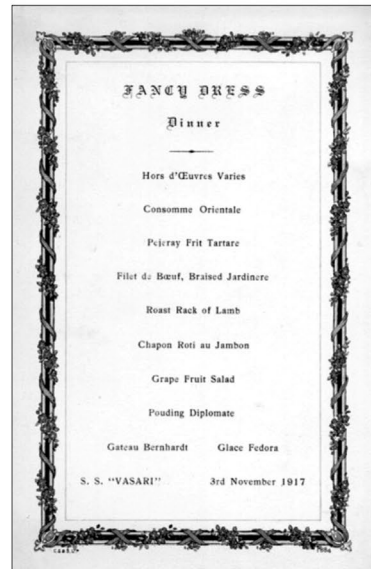
A



B



C



D

Fig. 6.—The S.S. 'Vasari.' A, the ship; B, its route map; C, a sample breakfast menu; D, a sample dinner menu. Taken from <http://www.bluestarline.org/lampor/vasari.html>.

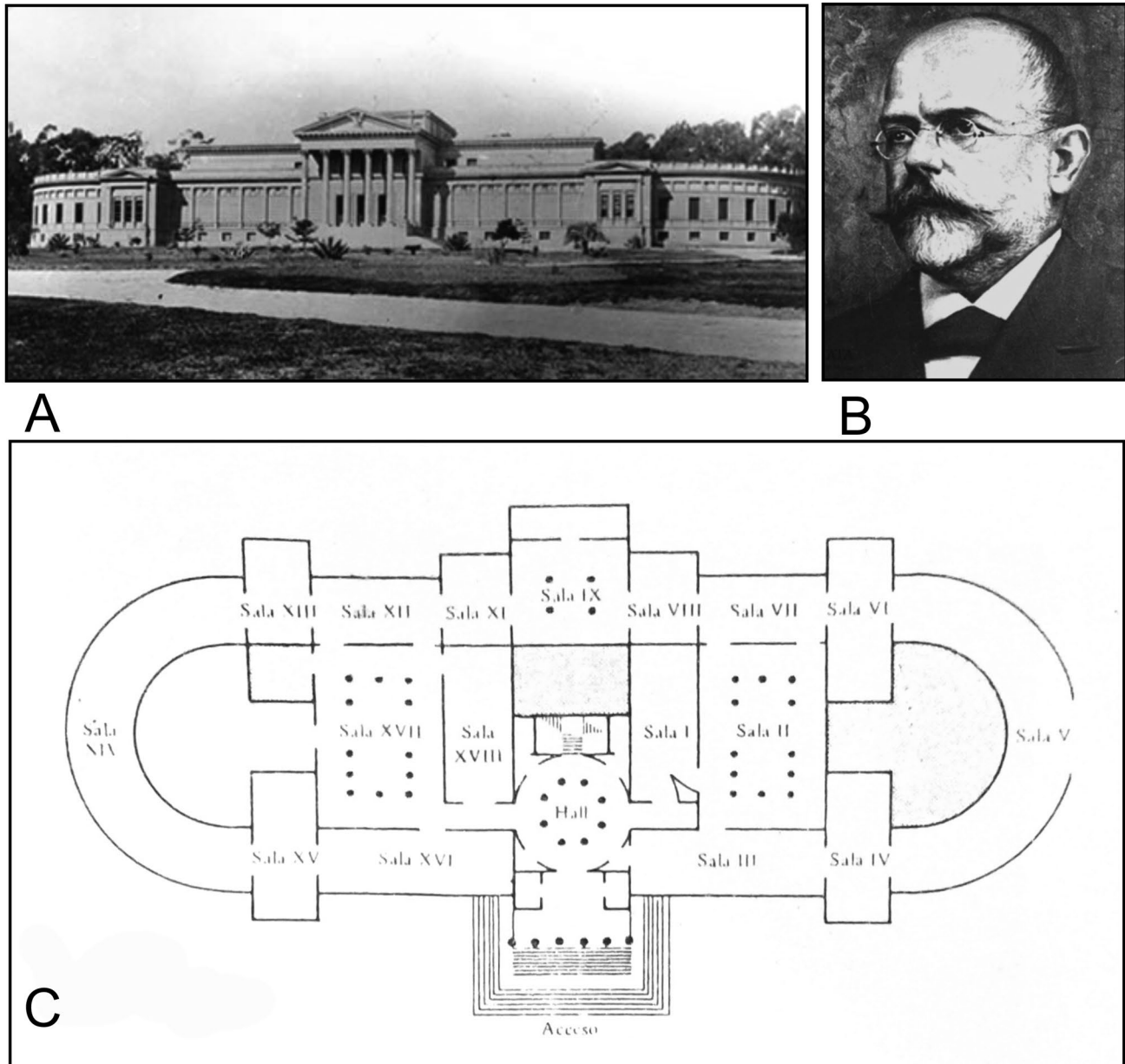
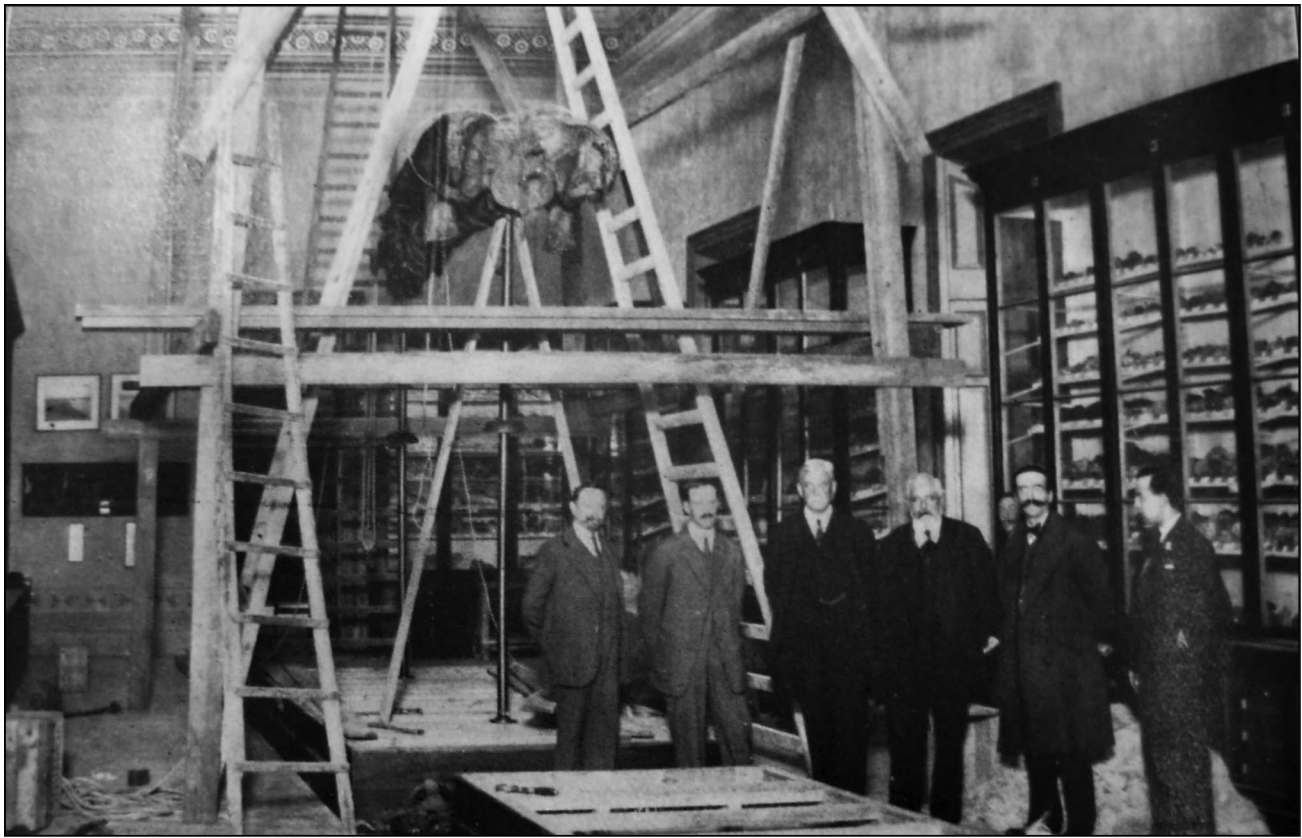


Fig. 7.—Museo de La Plata in early 1900s. **A**, Museo de la Plata (c. 1910); **B**, The museum founder and first Director, Francisco Pascasio Moreno (1852–1919); **C**, Distribution of the Museo de La Plata ‘Salas’ in actual fashion. **A**, **B** taken from archives of the Museo de La Plata; **C**, adapted from Teruggi (1994).

The director of Museo de La Plata in that time, Dr. Samuel Lafone-Quevedo, was on a trip in Europe. The trip from Buenos Aires to La Plata was made by train, which, at that time, belonged to the British ‘Ferrocarril del Sud,’ with more than 26,000 km of active railways throughout Argentina. The length of the Ferrocarril’s rails exceeded those of all other South American countries combined. Once in La Plata, Holland and Coggeshall were directed to the Observatorio Astronómico, next to the museum, where they were given lodging.

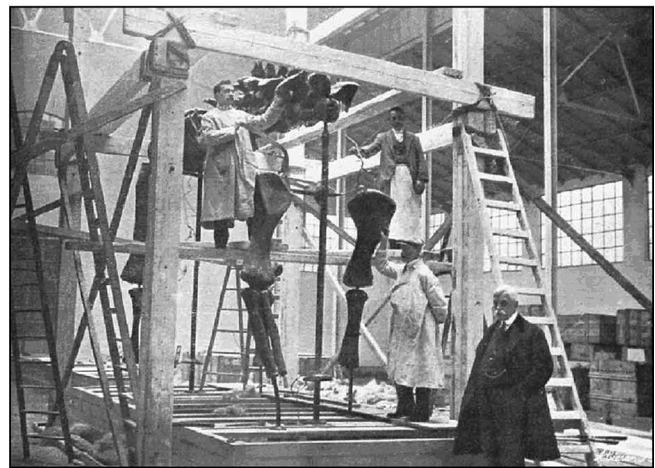
The site where the replica would be mounted in the Museo de La Plata (Figs. 7A, C) had already been decided. It would be in ‘Sala III’ of the ground floor, which was dedicated to ‘Invertebrados y plantas’ (*Invertebrates and plants*) and is currently known as the ‘Sala Frenguelli.’ Opposite to this room is the Sala XVI, also known as ‘Osteología Comparada’ (*Comparative Osteology*), devoted to mammals. This room called the attention of Holland because there is the skeleton of the ‘vaca ñata’ (*ñata cow*). This kind of cow had the peculiarity of having the bones



A



B



C

Fig. 8.—Mounting of the cast of *Diplodocus carnegii* in various museums. **A**, Museo de La Plata, Argentina. Arthur Coggeshall and William Holland are second and third from left (Adapted from 'Caras y Caretas' magazine, 1912); **B**, British Museum of Natural History (National History Museum), London, UK (cartoon taken from Barrett et al. 2010); **C**, Museo Nacional de Historia Natural, Madrid, Spain (Taken from Pérez García and Sánchez Chillón 2009).

of the nose and face shortened, and the bones of the lower jaw overgrown, as occurred in bulldogs. The history of these strange kind of ruminants is quite interesting since

Charles Darwin devoted special attention on his 'Voyage of the Beagle,' describing those animals by having seen living specimens. Moreover, one specimen of this bizarre

animal was carried alive to the Museo de La Plata in late 1800s, in the times of Francisco Pascasio Moreno, the Museo de La Plata founder (Fig. 7B), and lived in the Museum's garden. The skeleton of this specimen is still displayed in the museum's exhibitions (Teruggi 1994).

Holland specifications on how to mount the replica of *Diplodocus* began long before the cast arrived in Argentina. In this way, detailed tips were pointed out through correspondence to the Director of the Museo de La Plata. For example, Holland emphatically insisted that the plans used for the mounting of *Diplodocus* at Vienna were followed in mounting the skeleton in La Plata, because those were much more precise and explicit than other plans, such as those used in Bologna's *Diplodocus* (William J. Holland. "Shipping & Mounting La Plata Replica." May 27, 1912. Box 28. 46–50 pp. William J. Holland Letterbooks. Carnegie Museum of Natural History Archives).

The way in which *Diplodocus* would be mounted generated some discussion and different opinions among the authorities and technicians of the Museo de La Plata. Some suggested that the head should be pointed toward the main hall, whereas others preferred to orient the skeleton the opposite way. Some favored the tail completely extended, whereas others recommended that it be curved, as had been done in the museum in Paris. Eventually, the configuration that was decided upon was with the head pointing toward the main hall and the tail resting on the floor and curved at its end, as Holland suggested (Teruggi 1963).

The mounting of the skeleton was accomplished using huge scaffolds, as had been done for the replicas displayed in Europe, and the steel girders that supported the roof of the building also provided crucial support for the skeleton (Fig. 8). The original material that was used to make the cast was plaster mounted on a metal frame. The biggest pieces were massive, internally strengthened with iron, whereas the vertebrae, which were mostly hollow, were reinforced with straw and burlap. The base of the replica would be made on wood, as occurred with the other *Diplodocus* casts around the world. In this regard, the wood employed and the finish were left to the taste of Museo de La Plata staff, so that it may match other furniture in the hall where the model was set up. For example, the *Diplodocus* base in England and Germany was made of mahogany; in France, polished oak was used; in Italy, Italian walnut, as in Austria and with the original skeleton in Pittsburgh. Finally, St. Petersburg authorities favored a base ebonized-painted black and enameled (William J. Holland. "Shipping & Mounting La Plata Replica." May 27, 1912. Box 28. 46–50 pp. William J. Holland Letterbooks. Carnegie Museum of Natural History Archives). In La Plata the base was made of criollo walnut (*Juglans australis* Gris) and consisted of three parts: one that supported the neck, one for the legs, and one for the tail (Holland 1913). The mounted skeleton was about four meters tall at the hips and 27 meters long (Hatcher 1901: pl. XIII).

After the skeleton was mounted, there was a formal

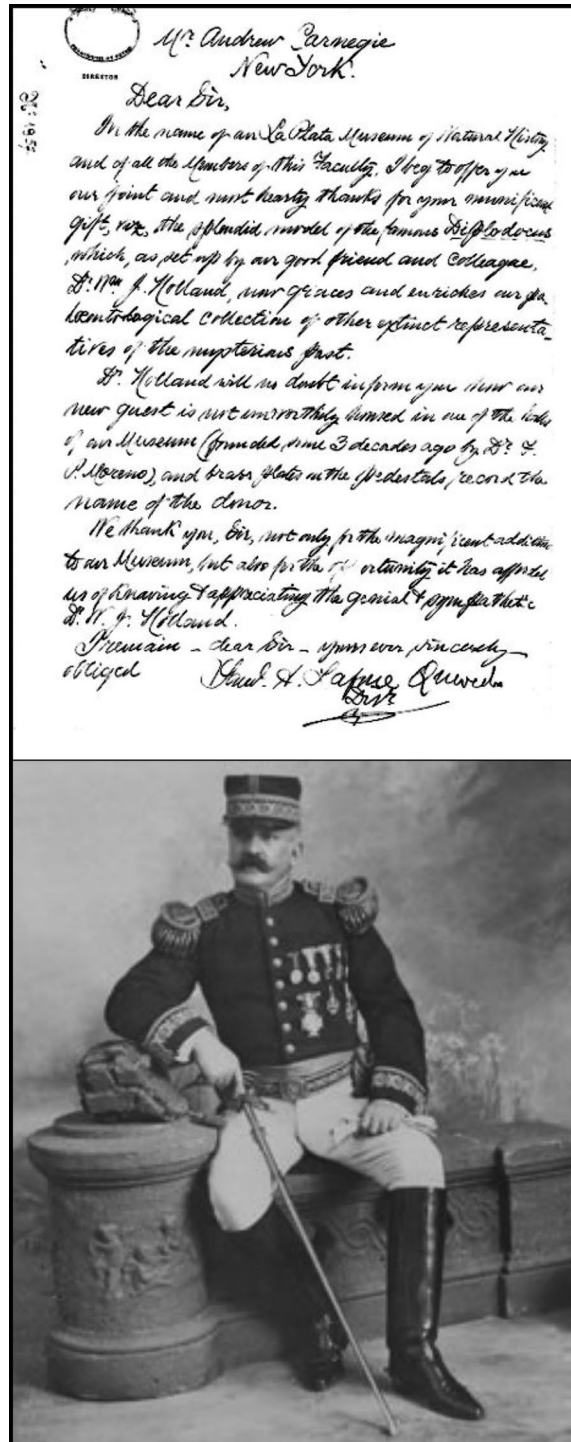


Fig. 9.—*Diplodocus carnegii* comes to the Museo de La Plata. Letter of acknowledgment from Museo de La Plata then Director Samuel Lafone-Quevedo to Andrew Carnegie (top) (Andrew Carnegie. October 24, 1912. Andrew Carnegie Correspondence Collection. Carnegie Mellon University Archives. Pittsburgh, PA). Argentinean president Roque Sáenz Peña sometime between 1910 and 1914 (bottom).



Fig. 10.—*Diplodocus carnegii* at the Museo de La Plata through time. **A**, original placement of the skeleton in Sala III, 1912; **B**, Sala V, 1996; **C**, Sala II, 2012; **D**, details of a small life replica of the dinosaur; **E**, plaque commemorating the gift.

meeting between Holland and the Argentinean president, Dr. Sáenz Peña (Fig. 9). The meeting was arranged for October 15 at 3:00 PM at the Casa de Gobierno (*Government House*) in Buenos Aires. That same night, to celebrate this spectacular gift, a banquet was given for the Carnegie Museum delegation. The meeting was held in the Hotel Sportsman, with many people from the Museum and the University of La Plata in attendance. During dinner at the hotel, a 1.5 meter replica of *Diplodocus* was displayed in the center of the main table. The Director of the Museum, Dr. Samuel Lafone-Quevedo, gave a speech expressing his gratitude to Andrew Carnegie and his representatives, in which William Holland was designated an Honorary Member of La Plata University. He further demonstrated his gratitude with a handwritten letter to Carnegie (Fig. 9). A second banquet, given by the universities of La Plata

and Buenos Aires, took place at the Jockey Club in Buenos Aires on October 24.

DIPLODOCUS IN LA PLATA TODAY: CHANGES TO THE DISPLAY AND A NEW POSE

The subsequent story of the cast of *Diplodocus* at the Museo de La Plata includes several moves. The huge skeleton donated by Carnegie has since been moved through three different exhibition rooms at the museum. But this is not all that has occurred in the life of this plaster colossus. Over the years, its appearance and posture have been changed to accord with new knowledge of the biology of the animal.

As mentioned above, the replica was originally mounted in Sala III, which is connected to the museum's entrance.

It remained there for 75 years (Fig. 10A). During this time, its color was dark gray, very similar to that of the original bones mounted in Pittsburgh. Throughout much of the 20th century, dinosaur skeletons were typically mounted with the tail resting on the floor, as if were dragging the ground as in modern reptiles. This conception of *Diplodocus* was endorsed by Hatcher (1901), based on the evidence of the unusual morphology of the middle and posterior chevrons, which purportedly indicated the point of contact of the tail with the ground (Hatcher 1901: 58, pl. XIII). Coupled with this interpretation, during that time, *Diplodocus* and other sauropods were hypothesized to have been aquatic or semi-aquatic (Osborn 1898, 1899; Hatcher 1901; Hay 1908, 1911) (Fig. 11A). The amphibious nature of *Diplodocus* was supported throughout the first half of the 20th century (Huene 1922, 1929; Wiman 1929). Nearly all dinosaur skeletons displayed through the end of that century were mounted with their tails on the ground, and the *Diplodocus* in La Plata was no exception.

During the second half of the 20th century, scientific conceptions of the locomotor habits of sauropods began to change, and the terrestrial habits of these dinosaurs gradually became accepted. In this sense, the pioneering works of Bakker (1971) and Coombs (1975) laid the theoretical foundations that demonstrated that the sauropod body plan convincingly accords with life on land. Functional approaches demonstrated the capacity of these dinosaurs to support their own weight and moving on land with the tail held off the ground (Alexander 1985, 1989; Carrano 1999, 2001) (Fig. 11B). Simultaneously, the ichnological record provided direct evidence of sauropod locomotion and reaffirmed the way in which these dinosaurs moved (Lockley et al. 1994; Wilson and Carrano 1999; Mazzetta and Blanco 2001).

In 1977, the Chief of the Division Paleontología de Vertebrados (*Vertebrate Paleontology Division*) of the Museo de La Plata, Dr. Rosendo Pascual, decided to change the color of the replica of *Diplodocus* and to repair several of its damaged vertebrae. The color chosen was a dark terracotta, very similar to that of construction bricks. Ten years later, the *D. carnegii* cast was moved to Sala V (formerly known as the ‘Sala curva’ – *Curved Saloon*), where other dinosaurs are mounted, such as a skeleton of the titanosaurian sauropod *Neuquensaurus australis* (Lydekker, 1893), a skull of the ceratopsian *Centrosaurus* Lambe, 1904, a cast of the skull of *Tyrannosaurus rex* Osborn, 1905, and the cast of the ornithomimid *Iguanodon* Mantell, 1825 (Fig. 10B).

The year 2003 witnessed radical changes to the aspect, posture, color, and location of the cast of *D. carnegii* mounted at the Museo de La Plata. A new project at the museum established the skeleton as the centerpiece of the exhibition ‘Tiempo y materia, laberintos de la exhibición’ (*Time and material, labyrinths of the exhibition*). The replica of *Diplodocus*, together with the femora of the colossal titanosaur ‘*Antarctosaurus*’ *giganteus* von Huene, 1929, were moved to Sala II, formerly the Mineralogy Hall, also

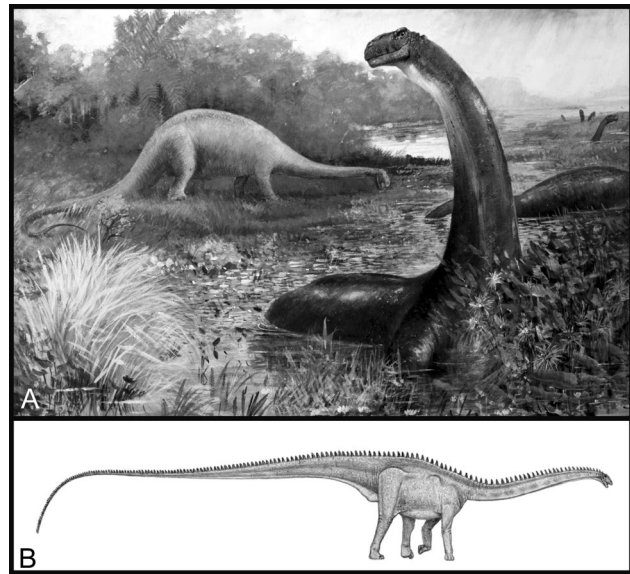


Fig. 11.—Reconstructions of sauropod posture through time. A, reconstruction of *Apatosaurus* Marsh, 1877 (then known as ‘*Brontosaurus*’) as semi-aquatic with a dragging tail by Charles R. Knight in 1897 (adapted from Taylor 2010); B, current conception of sauropod posture as shown in *Diplodocus* (adapted from Paul 2010).

called the ‘Dr. Walter Schiller Sala’ in honor of this famous Argentinean geologist (Fig. 10C). The skeleton was fully disarticulated for restoration and repainting, which was jointly conducted by the museum’s Conservation and Exhibition staff, technicians from the Division Paleontología de Vertebrados, and artists from the Bellas Artes Faculty (Fig. 12).

The pieces of the cast skeleton were in poor condition, and many were damaged. This is because the plaster from which they were made is very fragile. The last 25 vertebrae of the tail were molded in plaster and resin because they were missing, whereas other elements that had deteriorated were reinforced with bandages and plaster.

The old, brick-colored paint that covered the bones was first replaced by a uniform gray layer, and then covered by a final black layer similar in color to the original bones. The skeleton was remounted in the new Sala to accord with recent hypotheses on the posture of dinosaurs. Sauropod specialist Dr. Leonardo Salgado acted as a consultant on the posture of *Diplodocus*. No longer would the tail lie on the floor; instead, it was raised erect to counterbalance the long neck, and tipped with a series of ‘whiplash’ vertebrae. The metal armature of the skeleton needed to be modified to accommodate this change in posture. The whole task took 60 days.

The mounting of the replica of *D. carnegii* at the Museo de La Plata was important because it constituted a key event that definitively established this already-prestigious museum on the global scene. It constitutes a presidential gift that, more than 100 years later, remains the museum’s undisputed icon.

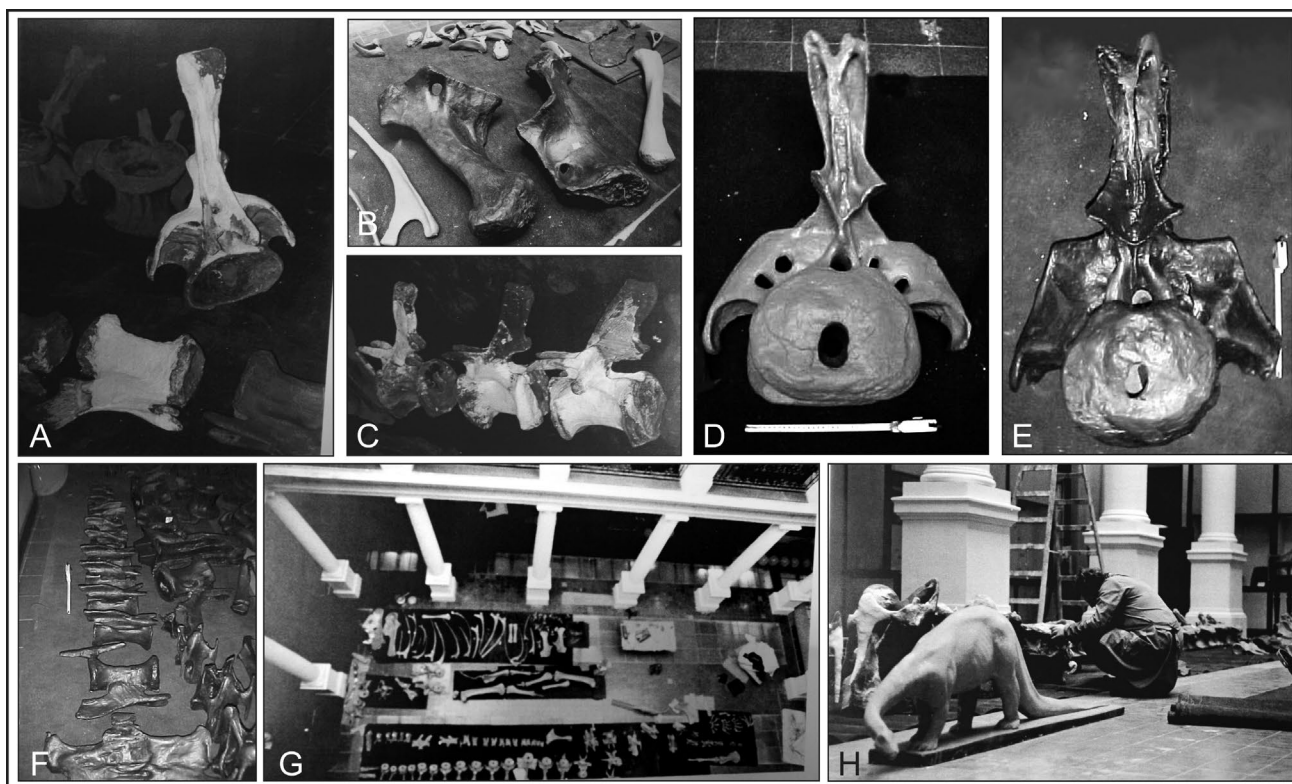


Fig. 12.—Various stages of the disarticulation and restoration of the cast of *Diplodocus carnegii* at the Museo de La Plata during 2003. **A**, some vertebrae restored with plaster; **B**, restored pelvic elements; **C**, some caudal vertebrae restored with plaster; **D**, caudal vertebra with the first layer of paint; **E**, caudal vertebra with the final layer of paint; **F**, disarticulated elements; **G**, whole disarticulated skeleton from top view; **H**, small replica and technicians working on the cast of *Diplodocus*.

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