
HoST – Journal of History of Science and Technology

Vol. 20, no. 1, June 2026, pp. 79–110

doi: 10.2478/host-2026-0004

· THEMATIC DOSSIER ·

ZOOLOGY AND COMMERCE

ACCLIMATISING THE USEFUL ANIMAL IN THE IBERIAN WORLD AND BEYOND

Centre of Acclimatisation: Francesc Darder and the Barcelona Zoo circa 1900

Oliver Hochadel

Institució Milà i Fontanals (CSIC), Barcelona

oliver.hochadel@imf.csic.es

Abstract: Francesc Darder (1851–1918) wanted to turn the Barcelona Zoo, founded in 1892, into an institution dedicated to the acclimatisation of useful animals. Backed by the City Council, Darder launched several institutions and initiatives both inside and outside the zoo: animal auctions, poultry breeding, exhibitions, a zootechnical museum, and fish farming. With the help of modern technologies, the economic benefits of both “exotic” and domestic animals and their products were to be maximised. This policy was, implicitly, also meant to stabilize the Catalan economy after the loss of the last Spanish colonies in 1898 and to mitigate the strong social tensions in Barcelona at the time. This case study shows that the acclimatisation movement in Europe lasted well beyond its alleged demise around 1870 and that its connection with zoos could take on very specific forms, shaped by the social and political conditions of its urban contexts.

Keywords: acclimatisation; zootechnics; urban history; animal husbandry; zoos

A New Zoo

The Barcelona Zoo got off to a rocky start. On the morning of the inauguration day on 24 September 1892, it rained cats and dogs, not to speak of the strong wind. At least in the afternoon, it cleared up, allowing the visitors to take a good look at the animals in the Parc de la Ciutadella, where the new zoo had been installed.¹ One might assume that the opening of such an institution would have made major headlines, but in the conservative *Diario de Barcelona*'s coverage, it was only mentioned in passing. *La Dinastía* did not even report it on the day. The republican daily *El Diluvio*, always critical of what the Ayuntamiento, the City Council (the zoo was a municipal institution) would do, insisted on the free access of the “colección zoológica” and warned against preferential treatment of the “privileged classes,” while hardly mentioning the animals at all.²

Readers of *La Vanguardia*, another conservative newspaper, would have gotten much more detailed information. Between 23 September, on the eve of the zoo's inauguration, and 7 December 1892, Francesc Darder (1851–1918) published ten lengthy articles in *La Vanguardia*, all entitled “Parque zoológico de Barcelona,” many appearing on the front page. Darder, director of the zoo until his death in 1918, conceived of the newly created institution in more specific terms as “the foundation stone of the future acclimatisation and naturalisation zoo,” a centre for breeding economically useful animals.³

This article describes how Darder's acclimatisation programme developed. It will focus on four specific initiatives: 1. the auctions of animals and animal products produced within the zoo; 2. the breeding of poultry in and outside the zoo; 3. the Museo Zootécnico, opened in 1899, outside the zoo; and 4. the Laboratorio Ictiológico, the fish laboratory, opened in 1909, inside the zoo.

As we will see, the success of these initiatives was chequered, and some might even be described as failures. They seem to have had no bearing on the later history of the Barcelona Zoo or the Catalan economy and were there-

¹ *La Vanguardia*, 25 September 1892, 3.

² *Diario de Barcelona*, 23 September 1892, 11079; “La colección zoológica del Parque,” *El Diluvio*, 22 September 1892, Ed. Mañana, 3 (8012).

³ Francesc Darder, “Parque Zoológico de Barcelona,” *La Vanguardia*, 23 September 1892, 4; Emili Pons, *El parc zoològic de Barcelona. Cent anys d'història* (Barcelona: Edicions 62, 1992), 49.

fore largely forgotten. Yet this article argues that these initiatives deserve in-depth study. By describing the Barcelona Zoo in its first decades as a centre of acclimatisation, this article aspires to add to current historiography in two distinct ways.

First, it would like to contribute to the history of zoos and the acclimatisation movement. According to the established narrative, the acclimatisation of useful animals was an important *raison d'être* of many Western European zoos in the mid-nineteenth century. Yet the idea of bringing new species of useful animals to Europe did not live up to its promise and was therefore abandoned after 1870.⁴ More recent historiography paints a more complex picture, in geographic reach, chronology and thematic scope. It focuses on acclimatisation initiatives in the European colonies (particularly Australia) or on lesser-known cases (e.g., in the US, Brazil and Russia) in which zoos often played only a subordinate role or none at all. Scholars discuss the long-term ecological effects acclimatisation had on local ecosystems, stress the global networks in which the acclimatizers and their societies operated, and show that initiatives extended well into the twentieth century.⁵

The Barcelona Zoo presents a case that fits in neither of these two moulds. Darder formulated his acclimatisation programme well after it had allegedly failed in other European zoos. The fact that Spain was a colonial power in rapid decline in the nineteenth century and since 1898, after the loss of the last colonies in Cuba and the Philippines, in a sense, a former colonial power, makes the Barcelona case special. It illustrates how the meaning of acclimatisation changed over time, or, to put it differently, how the gap between its original, pre-1870 agenda and actual practices around 1900 widened. Al-

⁴ Christopher Lever, *They Dined on Eland. The Story of the Acclimatisation Societies* (London: Quiller Press, 1992), 110; Warwick Anderson, "Climates of Opinion: Acclimatization in Nineteenth-Century France and England," *Victorian Studies* 35, no. 2 (1992): 135–57, 151–53; Michael A. Osborne, *Nature, the Exotic, and the Science of French Colonialism* (Bloomington: Indiana University Press, 1994), 127.

⁵ To cite but a few newer publications: Anna Olenenko, "Camels in European Russia. Exotic Farm Animals and Agricultural Knowledge," in *Thinking Russia's History Environmentally*, eds. Catherine Evtuhov, Julia Lajus and David Moon, 151–73 (New York/Oxford: Berghahn, 2023); David Francisco de Moura Penteado, "Brazilian Dromedaries: A History of Acclimatization, Agricultural Modernization, and Camelids, 1857–1867," *Isis* 115, no. 2 (2024), 241–66; Simon Farley, "The Menace of Acclimatization: the Advent of 'Anekeitaxonomy' in Australia," *Historical Records of Australian Science* 36, no. 1 (2025), 1–11. For a more in-depth discussion see the introduction of this dossier.

though (or rather because) the Barcelona Zoo was small and “insignificant” on an international level, a detailed look at Darder’s acclimatisation initiatives adds a new variant to the spectrum of the acclimatisation movement. It underscores the decisive relevance of the local context, leading to the second contribution of this article.

This case study also aims to contribute to the urban history of Barcelona in a broad sense, including the history of science, as well as animal and environmental history. There are only a few systematic studies of the urban history of science in Barcelona around 1900, and hardly any that deal with the role of animals in the urban fabric.⁶ At the time, the city of Barcelona was growing at an exponential rate. The rapid industrialisation of Catalonia, the arrival of thousands of immigrants from other parts of Spain, and the new working-class neighbourhoods that had sprung up on the outskirts of the city increased social tensions. Historians speak of a “divided city”; social inequality posed a serious threat to social order.⁷

The focus on acclimatisation and animal breeding provides an instructive perspective on the notion of the “useful animal” and, hence, the intrinsic political dimension of Darder’s applied natural history.⁸ His initiatives were generally fully supported, ideologically, financially, and institutionally, by the municipal authorities and the Catalan bourgeoisie. Animals (whether “exotic” or domestic) were considered a vital resource of the political economy. The urban elites mobilized new technologies and approaches (acclimatization, breeding, incubation, “farming the waters”) trying to foster the economy and to weather a number of serious problems all emerging around 1900: the strong social tensions and class struggles of Barcelona (and Spain), the “post-colonial” phase of political uncertainty as well as the dwindling fish populations in Catalan freshwaters. Situating the various initiatives in applied nat-

⁶ Oliver Hochadel and Agustí Nieto-Galan, eds., *Barcelona: An Urban History of Science and Modernity, 1888–1929* (London/New York: Routledge, 2016).

⁷ José Luis Oyón, *La quiebra de la ciudad popular. Espacio urbano, inmigración y anarquismo en la Barcelona de entreguerras, 1914–1936* (Barcelona: Ediciones del Serbal, 2008).

⁸ The issue of the agency of the animals, much discussed in recent animal studies, remains outside the scope of this article. For a multi-species historiography approach of the early Barcelona Zoo see: Oliver Hochadel, “Avi. Representation and reality of Barcelona’s iconic zoo elephant (ca. 1873–1914),” *Humanimalia* 16 (Special Issue Integrating elephants into more-than-human narratives, eds. Violette Pouillard & Marianna Szczygielska), no. 1 (2025): 81–126.

ural history within their urban contexts, this article will explore which audiences Darder addressed and what he sought to convey to them. This will allow us to describe the Barcelona Zoo as a centre of acclimatisation reaching out well beyond the walls of the Parc de la Ciutadella.

Acclimatisation in Spain

Before we turn to Darder's attempt to turn the Barcelona Zoo into a centre of acclimatisation, we shall describe how the acclimatisation movement in Spain, and in particular in Catalonia, evolved in the second half of the nineteenth century and how to situate it in the international context. From early on, Spanish acclimatisers considered a zoological garden vital to their enterprise, yet their efforts to create such an institution yielded, at best, mixed results. The acclimatisation zoo of the naturalist Mariano de la Paz Graells (1809–1898), founded in 1859 on the grounds of the Botanical Garden in Madrid, had to close after the revolution of 1868, with practically nothing to show in terms of successful and profitable acclimatisation of animals.⁹

The institutional base south of the Pyrenees was weak. Spain had no acclimatisation association of its own, only a delegation within the French Société Zoologique d'acclimatation (founded in 1854 by Isidore Geoffroy Saint-Hilaire).¹⁰ In the 1860s, thanks to Graells, a considerable number of Spanish naturalists became members of the Société, many of them living in Barcelona. The Swiss chemist Frédéric Sacc (1819–1890) had been a founding member of the Société and moved later on to Barcelona. In 1862, he informed the Société that “he (hoped) to see the establishment of a garden and a menagerie of useful animals in Barcelona in the near future.” This turned out to be no more than an announcement; Sacc had already left Barcelona in 1866. In 1870, the Barcelona branch ceased to be a subsidiary of the Société.¹¹ This was pre-

⁹ Santiago Aragón, *El Zoológico del Museo de Ciencias Naturales de Madrid. Mariano de la Paz Graells (1809–1898), la sociedad de aclimatación y los animales útiles* (Madrid: Museo Nacional de Ciencias Naturales / CSIC, 2005), 142–88, and in particular 199–200.

¹⁰ Santiago Aragón, “Le rayonnement international de la Société zoologique d'acclimatation. Participation de l'Espagne entre 1854 et 1861,” *Revue d'histoire des sciences* 58, no.1 (2005): 169–206.

¹¹ Aragón, *El Zoológico*, 116; for Barcelonese members see 89 and in particular 115. Quote: “Extrait des procès-verbaux des séances générales de la Société,” *Bulletin de la Société impériale zoologique d'acclimatation* 9 (1862): 241.

cisely the moment when the acclimatisation movement in Western Europe entered rapid decline, as mentioned earlier.

Yet on the local stage of Catalonia, a new actor appeared around the same time pursuing an acclimatisation agenda. On his private estate in Horta, at the time still outside the city limits of Barcelona, the banker Lluís Martí-Codolar (1843–1915) established in 1865 a private menagerie, the “Granja Vella” (Old Farm). Around 1872, Martí-Codolar asked the young Darder to take care of his animals. Arguably, Darder imbibed his lifelong fascination for acclimatisation in this context. As early as March 1877, Darder gave a talk on the “Usefulness and importance of breeding, multiplication, conservation and improvement of domestic animals,” praising the installations for chickens, ducks, and rabbits at the Granja Vella.¹²

One of his chores was to travel abroad (mostly to Paris) to acquire animals and escort them back to Catalonia.¹³ Albert Geoffroy Saint-Hilaire (1835–1919), son of Isidore and long-time director of the Paris acclimatisation zoo, knew both Martí-Codolar and Darder. In 1880, he donated a scarlet macaw to the Granja Vella.¹⁴ The collection included some “show animals,” among others, an Asian elephant, a giraffe, gazelles, and a caiman. Most of the creatures were more in line with the acclimatisation agenda, i.e., useful animals: a camel, guanacos, kangaroos, and, by far the largest group, different kinds of poultry: in particular, chicken, but also ducks and pheasants, ostriches, and swans. In the spring of 1892, due to serious financial difficulties, Martí-Codolar sold his animal collection to the city of Barcelona. Roughly 160 animals (mostly birds and roughly 40 mammals) formed the original core of the new zoo, located in the Parc de la Ciutadella, the venue of the Universal Exposition of 1888.

¹² Francesc Darder, “Utilidad é importancia de la cria, multiplicación, conservación y mejora de los animales domésticos,” in *Conferencias agrícolas... publicadas por el Fomento de la producción nacional*, ed. Fomento de la producción nacional (Barcelona: Narciso Ramírez y C.^a, 1877), 1–14.

¹³ Francesc Darder, “Parque zoológico de Barcelona III,” *La Vanguardia*, 28 September 1892, 1; Ramon Alberdi and Rafael Casanovas, *Els jardins de Martí-Codolar. La Granja Vella* (Barcelona: Ajuntament de Barcelona, Districte d’Horta-Guinardó, 1999), 47.

¹⁴ Francesc Darder, “Introducción de animales exóticos en Cataluña,” *Revista Universal Ilustrada* V, no. 15 (1880): 3–4.



Figure 1: The Camel of the Granja Vella.
Courtesy: Arxiu Municipal, Districte d'Horta-Guinardó, Barcelona.

Already in the years before 1892, the Parc had become a “repository” for animals. Gifts from foreign politicians and businessmen, such as caimans, crocodiles, and pheasants, were kept there in isolated cages.¹⁵ After the end of the exposition, the grounds of the Parc were in a sense “waiting” to be filled with a new purpose. And it was exactly at this moment, when the first concrete plan to found an acclimatisation zoo in the Parc was proposed by Reinhold Brehm (1830–1891), a German physician and ornithologist who had lived in Madrid since the late 1850s and moved to Barcelona in the autumn of 1888. The exhibition closed on 9 December 1888, and only three days later, the Ayuntamiento already debated his proposal.¹⁶ Brehm had a certain “name

¹⁵ See *El Diario de Barcelona*, 30 October 1889, Ed. mañana, 13232; 12 November 1889, Ed. tarde, 13821; 29 March 1890, Ed. tarde 4067; 30 May 1890, Ed. mañana, 6643.

¹⁶ Abilio Reig-Ferrer, “El proyecto del Dr. Reinaldo Brehm de fundar un jardín zoológico y de aclimatación en Barcelona en el año 1888,” *Argutorio* 43 (2020): 84–96. On Reinhold Brehm more generally see Abilio Reig-Ferrer and Michael Theuring-Kolbe, eds., *Reinhold Bernhard Brehm, Kleine Schriften der Naturforscherfamilie Brehm*, Vol. III/1 (Remagen-Oberwinter: Kessel, 2020);

recognition” because he was the brother of Alfred Edmund Brehm (1829–1884), one of the most widely-read popularisers of natural history around 1900.

Between December 1888 and early 1891, Reinhold Brehm negotiated with the Ayuntamiento his plan “to establish an acclimatisation zoo in Barcelona.” He claimed that a Berlin bank would invest up to 1 million pesetas in such an institution if the city provided 6 hectares of Parc ground and a free 30-year lease.¹⁷ In 1890, Brehm published a book on canaries and several articles on “useful birds” in Barcelonese periodicals to underscore his credibility as a future director of an acclimatisation zoo. His unexpected death on 19 March 1891 ended these negotiations, which were close to agreement. So had Reinhold Brehm not died suddenly and Martí-Codolar not gone bankrupt, the story of the Barcelona Zoo might have been quite different. Yet it is telling that both projects bore the name acclimatisation, deployed a utilitarian discourse when referring to zoo animals, and gave protagonism to birds.

The articles Darder published in *La Vanguardia* on the occasion of the zoo’s opening in the autumn of 1892 may be considered an acclimatisation manifesto. The new zoo director felt the need to justify the new institution in light of the alleged decline of the acclimatisation movement. The first three articles dwelt on the history of acclimatisation throughout the nineteenth century. Darder insisted on Spain’s considerable contribution in this respect and listed a series of attempts to create centres for the acclimatisation of fauna, such as the one in Sanlúcar de Barrameda (Andalusia) at the beginning of the century, initiatives of King Fernando VII in Madrid’s Parque del Buen Retiro in the 1820s, and Graells’ short-lived acclimatisation zoo.¹⁸ Darder deplored the little success these initiatives had had, weighed down by adverse political circumstances. Spain had lost its leadership. Despite everything, the

Abilio Reig-Ferrer, Catalina Soto de Prado and Michael Theuring-Kolbe, *Der geheimnisvolle, vergessene Brehm. Dr. Reinhold Bernhard Brehm. Arzt, Naturforscher, Historiker, Geschäftsmann* (Arnstadt: THK, 2021).

¹⁷ Letter Reinhold Brehm to Ayuntamiento, 18 December 1888; Sesión 12 December 1889, f. 853v, Actas Ayuntamiento 1889, Arxiu Municipal Contemporani de Barcelona (AMCB); *La Vanguardia*, 12 April 1890, 2.

¹⁸ Already Graells had claimed Spain’s leadership in matters of acclimatisation in 1860 when he tried to promote his acclimatisation zoo in Madrid; Mariano de la Paz Graells, “Reproducción del avestruz de África en España,” *La América*, 8–9 (24 November 1860): 8–9, 8.

initiative “fortunately ... was not abandoned by all.” Darder highlighted the “great perseverance and considerable sacrifices” of his former employer, Martí-Codolar, and his efforts in this “patriotic enterprise,” which yielded “magnificent results.”¹⁹

In the last quarter of the nineteenth century, the acclimatisation project of Isidore Geoffroy Saint-Hilaire was heavily criticised. The most vocal detractor was the French veterinary André Sanson (1826–1902), who advocated zootechnics, i.e., focusing on useful domestic animals. According to Sanson, it would be much more economical to create specialised breeds of well-known animals rather than exotic and little-known ones.²⁰ This is to say that in France, there was a vivid debate between supporters of acclimatisation and zootechnics, the latter gaining the upper hand. By contrast, this was not the case in Spain.

Before the foundation of the zoo, Darder worked not only for Martí-Codolar but also as a veterinarian, taxidermist, and dealer in natural history specimens. To promote his business, he published two magazines: *El Zookeryx* (1876–1879) and *El Naturalista* (1886–1891). The subtitles of his journals, *Zoología, zootécnica, caza, pesca, equitación, variedades* (Zoology, zootechnics, hunting, fishing, horse riding, varieties) and *Aclimatación, zootécnica, incubación artificial, caza y pesca* (Acclimatisation, zootechnics, artificial incubation, hunting and fishing), respectively, were revealing, lumping together indiscriminately all kinds of approaches. Darder had read Sanson and even translated some of his writings in *El Zookeryx* in 1878.²¹ Yet he never discussed the opposition between the two approaches to breeding useful animals in his writings.

Between 1877 and 1891, Darder also published a series of manuals on various domestic animals, such as pigeons, ducks, and rabbits. The most successful one was *The Rabbit, the Hare and the Leporid*. Its subtitle neatly summed up its scope: *Practical manual on breeding and multiplying these rodents, de-*

¹⁹ Francesc Darder, “Parque zoológico de Barcelona III,” *La Vanguardia*, 28 September 1892.

²⁰ Benedetta Piazzesi, *Del governo degli animali. Allevamento e biopolitica* (Rome: Quodlibet, 2023), 212–16; Benedetta Piazzesi, “Pour une histoire du concept de domestication (France 1830–1860),” *Annales. Histoire, Sciences Sociales* 80, no. 1–2 (2025): 89–130, 128.

²¹ André Sanson, “Influencia de la consaguinidad,” *El Zookeryx ó el pregonero de los animales* 3, no. 62 (10 April 1878): 1–2; no. 67 (1 June 1878): 1–3; no. 68 (8 June 1878): 1–2.

scription of all breeds, diseases and their treatment: an easy and safe way to earn an annual income of 2,000 pesetas. It was published in half a dozen editions between 1886 and 1944, long after Darder had died.²² The last edition appeared amid widespread famine in the years following the end of the Spanish Civil War (1936–1939). These booklets had no scientific pretences, aimed to instruct the lower-middle classes to breed small animals for their own consumption or for sale.²³

Whatever animal or animal product that promised economic benefits, “exotic” or not, would be welcomed in Darder’s opportunistic programme of applied natural history. While reviewing Darder’s initiatives in and around the Barcelona Zoo starting in 1892, we will see that some of these initiatives may be better classified as “acclimatisation,” while others deserve the epithet “zootechnics.”

Acclimatisation and Animal Commerce at the Barcelona Zoo

To sketch the institutional context: The Barcelona Zoo was a municipal institution and was part of the Museo Martorell, Barcelona’s natural history museum, founded in 1882. In 1893, the Ayuntamiento established a Junta técnica de los Museos de Ciencias Naturales, Parque Zoológico y Jardín Botánico (henceforth, the Junta) to oversee the growing number of scientific institutions in the Parc de la Ciutadella. In this way, Barcelona’s urban park evolved into a “science popularisation park” in the early twentieth century.²⁴

In his programmatic articles from the autumn of 1892, Darder provided an overview of the useful animals that the new Barcelona Zoo would house, accompanied by engravings. They dealt with poultry, particularly chickens, but

²² Francesc Darder, *El Conejo, la liebre y el lepórido*, 5 ed. (Barcelona: Memphis, 1944).

²³ Oliver Hochadel and Laura Valls, “De Barcelona a Banyoles. Francesc Darder, la història natural aplicada i la Festa del Peix,” in *Dels museus de ciències del segle XIX al concepte museístic del segle XXI. Cent anys del Museu Darder de Banyoles*, eds. Crisanto Gómez, Josep Maria Massip and Lluís Figueras, 23–41 (Banyoles: Centre d’Estudis Comarcals Banyoles, 2017), 29–30.

²⁴ Oliver Hochadel and Laura Valls, “Civic Nature. The transformation of the Parc de la Ciutadella into a space for popular science (1872–1917),” in *Barcelona: An Urban History of Science and Modernity, 1888–1929*, eds. Oliver Hochadel and Agustí Nieto-Galan, 25–45 (London/New York: Routledge); Laura Valls, *Natura cívica: ciència, territori i ciutat al Parc de la Ciutadella de Barcelona a principis de segle XX* (PhD, Universitat Autònoma de Barcelona, 2019).

also ducks. Among the mammals, Darder singled out camels and deer as the ideal species for acclimatisation. Darder intended to continue with the programme that he embraced throughout his career, to exploit animals and their by-products in a systematic and comprehensive way. This section will look at how far this programme of applied natural history played out in the zoo.

To understand the zoo as a breeding station for useful animals implied the monetisation of these animals. Animals carried a price tag; their value could be expressed in pesetas, no matter whether they were “exotic” or not. In 1897, Darder published a 24-page *El Catálogo del Parque zoológico municipal* to facilitate the sale. The Asian elephant was worth 20,000 pesetas; the vast majority of the animals (apes, donkeys, parrots, and crocodiles, among others) cost between 50 and 300 pesetas. Darder clarified that “to maintain the Zoological Collection, only those specimens that are considered appropriate will be offered for sale.”²⁵ Presumably, the star of the zoo, the elephant Avi, was not on offer.²⁶

The most visible example of this commercialisation was the public auctions of “surplus animals.” These auctions took place between 1893 and 1917, generally twice a year, once between May and July and once in November or December.²⁷ Mammals (dogs, wild boar, goats) and poultry (in particular chickens, pheasants, ducks, and pigeons) were on offer. In July 1898, several lions were also for sale: adults for 10,000 pesetas and cubs for 1,000 pesetas, but none found a buyer. In addition to animals, fertilised eggs, and even the animal fat from the municipal slaughterhouses of Barcelona were sold (Fig. 2).

²⁵ *Catálogo del Parque zoológico municipal* (Barcelona: Henrich, 1897), 3.

²⁶ On the stardom of the elephant, see Hochadel, “Avi.”

²⁷ Sources on the auctions: “Venta en pública subasta, de los ejemplares duplicados, reproducidos y sobrantes de la Colección Zoológica del Parque. 1894–1902,” C3 Exp. 18; “Subasta verificada de animales sobrantes y reproducidos del Parque Zoológico. Barcelona, 1906–1916,” C30 Exp.6; “Publicacions. Premsa, 1917,” C38 Exp.6; Llegat de Julio Gómez-Alba, Separates: Zoo de Barcelona, Caixa A and B; Arxiu Històric del Museu de Ciències Naturals de Barcelona (AH-MCNB).

Ayuntamiento Constitucional de Barcelona

PARQUE ZOOLOGICO



En virtud de lo acordado por este Excmo. Ayuntamiento, **el domingo próximo, día 24 de los corrientes, de diez á doce de la mañana**, se procederá en el **Umbráculo frente la Pajarera-palomar**, á la venta en pública subasta, bajo la presidencia de la Muy Ilre Comisión Municipal de Gobernación, de los animales sobrantes y reproducidos en el Parque Zoológico, consistentes en

MAMÍFEROS		TASACIONES
		<i>Pesetas</i>
2	leones adultos (Bluton y Micci)	10,000 los dos
3	» cachorros de 3 meses, machos	1,000 uno
2	» » de 4 » hembras	800 una
4	perras de Pastor (<i>de tura</i>) cachorras de 3 meses	15 »
4	perros Caniches blancos cachorros de 4 »	25 uno
3	chacales adultos, nacidos en la Colección	20 »
1	loba adulta	200 »
6	jabalies de la India	25 »
3	conejos Angola, adultos.	10 lote
2	» rico ó plateado	5 »
7	gazapos japoneses.	15 »
6	» plateados.	10 »
10	cobayas comunes (<i>cunills purquins</i>)	8 »
30	» Angola, en lotes de 10 ejemplares	10 »
2	cabras Angola, machos, pura raza	50 uno
1	» Angola × murciana, macho	15 »
AVES		
1	gallo Langsham, adulto.	15 lote
6	gallinas Holandesas, en lotes de 3 ejemplares.	25 »
12	gallinas » en lotes de 4 ejemplares.	25 »
500	pollitos de Cochinchina, Brahma-pootra, Castellana, Padua, Bantam, Prat, San Cugat.—Pavos comunes (variedad blanca), Guineas.	
300	palomas monjines, canela, rojo, blanco y negro, en lotes de 10 ejemplares (5 machos y 5 hembras)	10 »
6	cisnes negros, jóvenes, de Australia, en lotes de 2 ejemplares, sin garantir sexo	100 »
3	ocas de Guinea.	60 »
4	» comunes, variedad blanca, en lotes de 2 ejemplares.	12 »
20	docenas de huevos para incubar, en cajas de 12 huevos asurtidos de todas las razas existentes en la Colección.	4 caja
15	botes de grasa extraída de las caballerías que se sacrifican para las fieras.—Peso de cada bote, 5 kilos.	8 uno

Barcelona 17 de Julio de 1898
EL ALCALDE,
José Grieria y Dulcet

Hacheco y C^{ta}.—Barcelona

Figure 2: Announcement for the animal auction of the zoo, July 1898.
Arxiu Històric del Museu de Ciències Naturals de Barcelona, 3/18.

Sometimes, more than 50 different animals were auctioned. The proceeds from these public sales were considerable, ranging from 1,200 to more than 2,000 pesetas, i.e., some 4,000 pesetas per year. Fertilised eggs and animal

skins were sold throughout the year.²⁸ The sale of animals and their products provided some liquidity for the zoo, yet it was never enough to cover its running costs. In the 1890s, the zoo depended on a permanent subsidy from the Ayuntamiento, which averaged around 500 pesetas a month, i.e., 6,000 pesetas a year.²⁹ Darder often complained to his superiors that he barely had enough money to feed the animals.³⁰

Now let us contrast the acclimatisation programme, formulated by Darder in *La Vanguardia* in the autumn of 1892, with the initiatives described above. The Barcelona Zoo housed a few large animals, such as ostriches and llamas, but there seem to have been no serious attempts (let alone successes) to breed them for commercial purposes. The camel from the Granja Vella (old and sickly when transferred to the zoo; see Fig. 1) had already died in December 1892, in contrast to Darder's highfalutin declarations of the camel's potential (workforce, meat, milk) in *La Vanguardia* the previous month.³¹ Mainly, poultry and other small or medium-sized animals were auctioned. The sale of surplus animals was restricted to those that Catalan agriculturists and breeders were accustomed to keeping. The ambitious acclimatisation programme that Darder had announced was never seriously pursued.

Darder, for all his interest in breeding, had no interest in "theory" at all, Darwinian or other, and always stylised himself as a "practical man" dedicated to the common good.³² In terms of theoretical framing, Darder's "centre of acclimatisation" was more than fuzzy. He sprinkled his series of articles in *La Vanguardia* in 1892 with a good dose of acclimatisation rhetoric. Despite allusions to historical forerunners, there was no well-defined programme; cir-

²⁸ Pons, *El parc zoològic*, 48.

²⁹ See the sources mentioned above.

³⁰ Letter F. Darder to Junta, 18 March 1902, AH-MCNB, 3/6; see also Pons, *El parc zoològic*, 64.

³¹ *La Vanguardia*, 23 December 1892, 2; Francesc Darder, "Parque zoológico de Barcelona IX," *La Vanguardia*, 12 November 1892, 1.

³² Ramón Turró, "En Francesc Darder," *La Veu de Catalunya*, 16 April 1918, 9; Josep Cuello and Jordi Martí Henneberg, "Ciència per a tothom i naturalistes extraacadèmics," *La ciència en la història dels Països Catalans*, ed. Joan Vernet and Ramon Parés, 221–52 (Valencia: Institut d'Estudis Catalans / Universitat de València, 2009), 236; Oliver Hochadel, "Darwin in the Shadows. Traces of Evolutionary Theory in the Work of the Barcelonese Naturalist Francesc Darder," in *Darwin y el darwinismo desde el sur del sur*, ed. Gustavo Vallejo, Marisa Miranda, Rosaura Ruiz Gutiérrez and Miguel Ángel Puig-Samper, 133–50 (Aranjuez: Doce Calles, 2018), 134.

cumstances and Darder's personal preferences determined the activities, as we shall see in the next section.

Chicken Coops in the Zoo



Figure 3: Incubator room at the Granja Vella.
Brangulí, Arxiu Nacional de Catalunya, ANC1-42-N-20975.

The breeding of poultry was a lifelong passion for Darder. It was arguably also formed in the 1870s and 1880s when he was working for Martí-Codolar. One of the few reports about visits to the Granja Vella highlighted that the chicken made up for the largest number of animals on the estate and that artificial incubation worked well: “a sign of progress in our land.”³³ In the late 1880s, Darder offered in his journal *El Naturalista* a range of products related to chicken breeding, such as artificial incubators of different sizes and an instrument called “ovoscopio” that allowed for determining whether the egg was incubated and how far the embryo had developed.³⁴ Possibly Darder also supplied incubators for the Granja Vella. Once the collection of “exotic” animals had left his estate in 1892, Martí-Codolar turned it into a “chicken fact-

³³ Raymond Gili, “Excursió col·lectiva y visita oficial á la col·lecció zoológica de D. Lluís Martí y Gelabert, en lo terme d’Horta. Dia 6 de juliol de 1884,” *Butlletí de la Associació d’Excursions Catalana* 7 (1885): 43–48, 45–46, quote 44.

³⁴ Later on, Darder published a short practical treatise on how to determine its sex: Francesc Darder, *Sexo á voluntad. Opúsculo ilustrado con grabados* (Barcelona: Henrich y C.^a, 1893).

ory.” Photos show enclosures teeming with poultry and a room with artificial incubators stacked along each wall, a technology that facilitates large-scale hatching of fertilised eggs (Fig. 3). Around 1915, the Granja Vella “produced” 100,000 chicklets, the largest site of its kind in Spain at the time.³⁵

Since around 1880, Darder went “hen-hunting” abroad while touring “the main European acclimatisation zoos,” the goal being “to restore to our farmyards the ancient breeds of Andalusian roosters and hens, of which we now possess only stunted and transformed remnants.”³⁶ This “hen-hunting” included the recuperation of “ancient breeds” such as the “Catalana Prat,” a breed of a large-sized chicken and Darder’s favourite, which he scouted for in farms in the vicinity of Barcelona. The term “ancient breeds” is somewhat misleading, as breeders have continually sought to improve their animals through crossbreeding. In the last third of the nineteenth century, the “Catalana Prat” had been crossed with the “raza Cochinchina” to increase the weight, as Salvador Castelló (1863–1950) explained.³⁷ The Spanish agronomist collaborated closely with Darder and Martí-Codolar and, in 1896, founded the “Escuela de Avicultura” (School of Poultry Farming) in Arenys de Mar, a coastal village north of Barcelona. Both Castelló and Darder were active in promoting poultry farming by lecturing in the Catalan countryside.³⁸ A caricature in the republican weekly *La Esquella de la Torratxa* from 1895 (Fig. 4) shows Darder teaching chicken breeding and criticises him for finding yet another way to earn money for himself.³⁹

³⁵ Salvador Castelló i Carreras, “Obituario: El patriarca de la avicultura española Excmo. Sr. D. Luis Martí Codolar,” *La Avicultura Práctica*, no. 151 (1916), 4.

³⁶ Francesc Darder, *Revista Universal Ilustrada* 5, no. 13 (1880): 7; Francesc Darder, “Introducción de animales exóticos en Cataluña,” *Revista Universal Ilustrada* 5, no. 15 (1880): 3–4.

³⁷ Salvador Castelló, *Avicultura. Resumen de un curso completo de gallinocultura e industrias anexas* (Barcelona: Administración y Redacción de la Avicultura Práctica, 1899), 106; Fernando Orozco, “Apuntes históricos sobre la raza catalana del Prat (1),” *Selecciones Avícolas* 27, no. 5 (1985): 154–59, 155.

³⁸ José Antonio Mendizabal, *Avicultores para la historia (1896–1936)* (Pamplona: Universidad Pública de Navarra, 2007), 37, 59–61.

³⁹ “Vividores Municipals,” *La Esquella de la Torratxa*, 5 April 1895, 220.

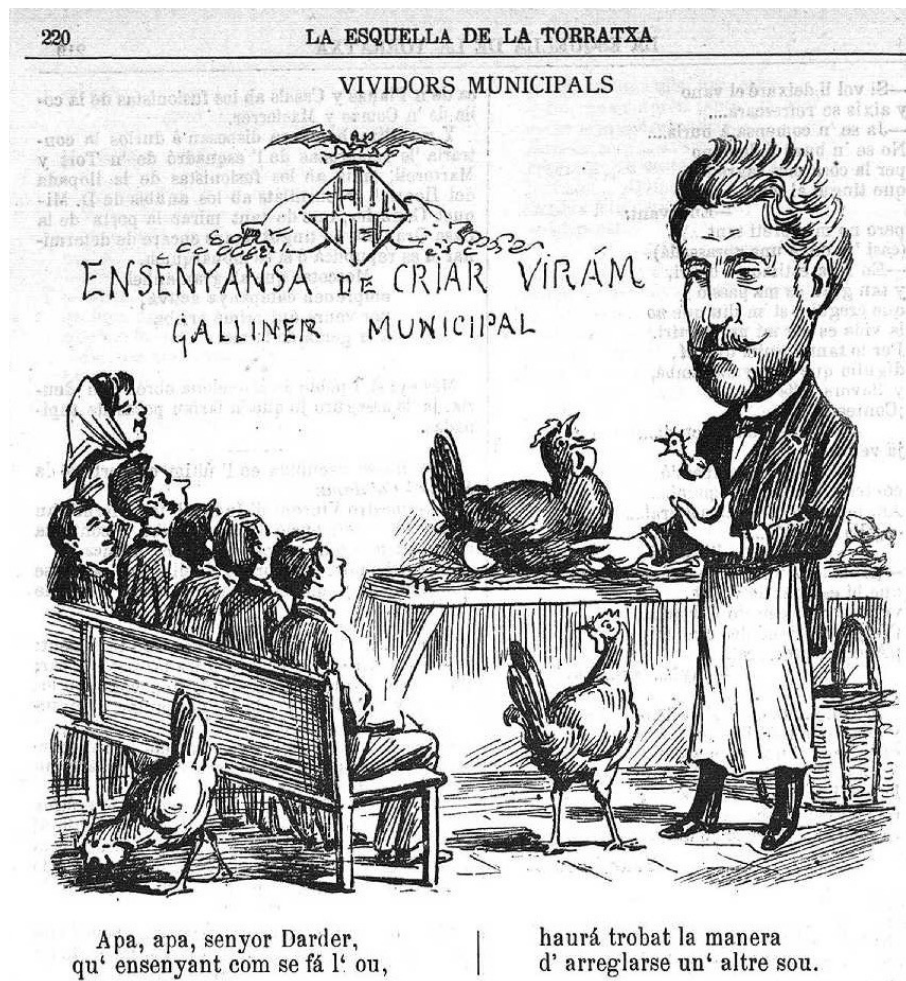


Figure 4: La Esquella de la Torratxa, 5 April 1895, 220;
Biblioteca de Catalunya.

Chickens and henhouses are not something we associate with zoos nowadays, although they have been a mainstay of zoos since their founding.⁴⁰ Many zoos in the late nineteenth and early twentieth centuries held large numbers of fowl and other useful birds, often alongside other domestic birds, selling eggs to supplement their budgets, e.g., in Buenos Aires, Madrid, Berlin, Cologne, Vienna, Dresden, and Moscow.⁴¹ In 1882, a visitor to the Berlin

⁴⁰ See already Pons, *El parc zoològic*, 47; Josep Cuello, "La Zoologia," in *Les ciències i les tècniques populars, Tradicionari. Enciclopèdia de la cultura popular a Catalunya*, vol 9., ed. Josep M. Camarasa and Joan Soler, 148–70 (Barcelona: Enciclopèdia Catalana, 2007), 168.

⁴¹ Buenos Aires: Ashley Kerr, *Vida zoo-cial: The Buenos Aires Zoo and the Making of Argentine Society, 1875–1924* (Nashville: Vanderbilt University Press, 2025) 32, 66, 128, 134; Madrid: Antonio

Zoo counted around 600 pigeons (roughly 50 different breeds) and around 230 chickens (roughly 50 different breeds).⁴² Some zoos were even founded by or in association with poultry breeding associations (Cologne (1860), Dresden (1861), Karlsruhe (1865), Basel (1874)).⁴³ The considerable variation in the size and colour of chickens was a testimony to the power of human breeding, as chickens (and pigeons) could be traced back to a single ancestor, as naturalists had argued since the 1850s. Displaying the enormous variety of breeds side by side in a public space, such as a zoo, proved to be a great incentive for visitors with a professional interest.⁴⁴ German naturalist Adalbert Seitz (later director of the Frankfurt Zoo) noted in 1889 that the zoo's public was very diverse. "The lay public primarily demands first and foremost sensational pieces," such as elephants. Still, there were also "hunters, chicken and pigeon breeders, the friends of pet birds" who would spend many hours watching the bird cages.⁴⁵

In 1890, Reinhold Brehm pointed to foreign zoos that had already deployed incubators and called for more systematic efforts to breed chickens in Spanish zoos and other sites.⁴⁶ For Darder, the new zoo played a central role in his poultry programme.⁴⁷ Three (out of ten) of the zoo-promotion articles in *La Vanguardia* in 1892 featured poultry, each illustrated. Darder discussed at

González Bueno, *De Real Casa de Fieras a Parque Zoológico: las colecciones de animales exóticos vivos en la ciudad de Madrid (1626–1972)* (Madrid: Dykinson, 2026), 138 (fn. 307), 195, 197, 210, 213 (fn. 516), 248; Berlin: Heinz Georg Klös, Hans Frädrich and Ursula Klös, *Die Arche Noah an der Spree. 150 Jahre Zoologischer Garten Berlin. Eine tiergärtnerische Kulturgeschichte von 1844–1994* (Berlin: FAB, 1994), 107–8; Cologne: Theo Pagel and Wilhelm Spieß, "Der Zoologische Garten in Cöln eröffnet am 22. Juli 1860. 150 Jahre Wildtierhaltung und -zucht," *Der Zoologische Garten* N.F. 80 (2011): 117–202, on 122; Vienna: Gerhard Heindl, *Start in die Moderne. Die Entwicklung der kaiserlichen Menagerie unter Alois Kraus* (Wien: Braumüller, 2006), 49; Dresden: "Ein Stündchen in Dresdens Zoologischem Garten," *Die Gartenlaube* 44 (1862): 699–704, 702; Frankfurt: Maximilian Schmidt, "Directionsbericht über den zoolog. Garten zu Frankfurt a. M. während des Betriebsjahres 1873. Vorgetragen in der Generalversammlung am 17. Juli 1874," *Der Zoologische Garten* 15 (1874): 339–47; Moscow: Nikolaus Kulaginn, "Aus dem Moskauer Zoologischen Garten," *Der Zoologische Garten* 30 (1889): 314–15.

⁴² Ludwig Wunderlich, "Statistisches aus dem Zoologischen Garten zu Berlin," *Der Zoologische Garten* 23 (1882): 115–17.

⁴³ Benjamin Lamp, *Entwicklung der Zootiermedizin im deutschsprachigen Raum* (PhD, Universität Gießen, 2009), 64.

⁴⁴ Klös, Frädrich and Klös, *Die Arche Noah*, 108.

⁴⁵ Adalbert Seitz, "Einiges über zoologische Gärten," *Der Zoologische Garten* 30 (1889): 353–59, 353, 354.

⁴⁶ Reinhold Brehm, "Aves de corral. Gallinas, gansos y patos," *La Ilustración Artística* 9, no. 461 (27 October 1890): 274–75.

length the virtues (“beauty” of shape, meat, egg-laying capacity) of breeds such as the “gallo Shang-hai” (Cochin chicken) and the Dorking chicken. One would rather expect such articles in an agricultural magazine than on the front page of a daily newspaper. In these articles, we also learn that there were six “gallineros” (henhouses) in the zoo.⁴⁸ As a Barcelona tourist guide from 1896 confirmed: “Among the most outstanding features is a large collection of chickens and chicken coops.”⁴⁹ As mentioned in the previous section, in auction announcements, different chicken breeds usually occupied most of the space.

Pere Martí Rossell i Vilar (1883–1933), a vocal proponent of zootechnics in Catalonia, wrote in June 1918: “The farmers, although they admire the lions and tigers, do not pay much attention to them; they stop longer to look at the rabbits, chickens and geese, and this is very natural, because what interests them most are the things with which a man earns his living.”⁵⁰ Rossell had Darder in mind, who had just died (Rossell would succeed him in 1919, together with his son Jeroni Darder, to run the Barcelona Zoo).

This section has shown that Darder and his circle addressed a public well beyond zoo visitors, including chicken farmers and middlemen dealing in poultry. With its regular auctions of poultry and chicken coops on permanent public display and its direct connection with Castelló’s school of poultry farming and Martí-Codolar’s chicken factory, the Barcelona Zoo was an important space to mediate and publicise poultry breeding, professionalizing this branch of livestock farming and aiming at an industrial scale of production aided by technology.

The Museo Zootécnico

The defeat against the US in the spring and summer of 1898 led to the loss of the colonies of Cuba and the Philippines. It inaugurated a period of intense debate within Spain about the state of the nation, which had ceased to be an

⁴⁷ Pere Màrtir Rossell Vilar, “El Parc de Barcelona, centre productor d’animals de llavor,” *L’Art del Pagès. Revista de l’Agricultura Catalana*, 10 June 1918: 4–6, 4.

⁴⁸ *La Vanguardia*, 4 October, 1–2; 15 October, 1; 21 October 1892, 1.

⁴⁹ Luciano García del Real, *Guía Barcelona Diamante* (Barcelona: Librería de Francisco Puig, 1896), 123.

⁵⁰ Rossell, “El Parc,” 4.

empire and was clearly in dire need of reform. Catalonia always had a huge economic stake in Cuba and was left wondering what the “desastre de 98” would mean for its economy.⁵¹ In this context of reeling from defeat and searching for new economic formulas, the Museo Zootécnico was inaugurated on 1 January 1899.⁵²

Already a year after the inauguration of the Barcelona Zoo in September 1892, Darder had launched a second set of programmatic articles in *La Vanguardia*, four in total, once more prominently featured on the front page, entitled “Proyecto de ampliación del Parque Zoológico” (Zoo Expansion Project).⁵³ Darder insisted: Catalonia needs to introduce new species or breeds of useful animals and it has to educate and animate its citizens in this respect. To turn the zoo into a centre of acclimatisation, it would need to be complemented by institutions and initiatives focused on animal production. Darder demanded an “Exposición Industrial permanente de Zootecnia.” It would not have been the first of its kind. The Jardin d’Acclimatation in Paris hosted a “kind of Technological Museum, showing various kinds of traps, falconry, old guns, birds and eggs, mineral specimens, household utensils, &c., and manufacturers send samples of their work there to be exhibited.” Darder had likely seen this museum on one of his visits to the French capital.⁵⁴

⁵¹ Sebastian Balfour, *The End of the Spanish Empire, 1898–1923*. Oxford: Clarendon Press, 1997.

⁵² The Museo Zootécnico has not received much interest from historians and was mostly only mentioned in passing: Rossend Casanova i Mandri, “Francesc d’Assís Darder i l’origen del Parc Zoològic de Barcelona,” *Revista de Catalunya*, no. 142 (1999): 36–41, 37–38; Laura Valls, “El museo de ciencias naturales de Barcelona (1882–1917): popularización de las ciencias naturales dentro y fuera del museo,” *Geo Crítica. Cuadernos Críticos de Geografía Humana* 15, no. 918 (2011), 9–11, 17; Agustí Nieto-Galan, “Scientific ‘marvels’ in the public sphere: Barcelona and its 1888 International Exhibition,” *HoST – Journal of History of Science and Technology* 6 (2012): 33–63, 61; Hochadel and Valls, “De Barcelona,” 30; Valls, *Natura cívica*, 27–28, 281, 322, 345; Enric H. March, *Barcelona Freak show. Història de les barraques de fira i espectacles ambulants del segle XVIII al 1939* (Barcelona: Viena Edicions i l’Ajuntament de Barcelona, 2021), 514–15.

⁵³ *La Vanguardia*, 26 September, 29 September, 3 October, 11 October 1893.

⁵⁴ Dudley Le Souef, *The annual report of the Zoological and Acclimatisation Society of Victoria, and report of the annual meeting of the Society for the year 1898* (1899): 13–21, 15–16; also Loisel, *Histoire des ménageries*, 291.

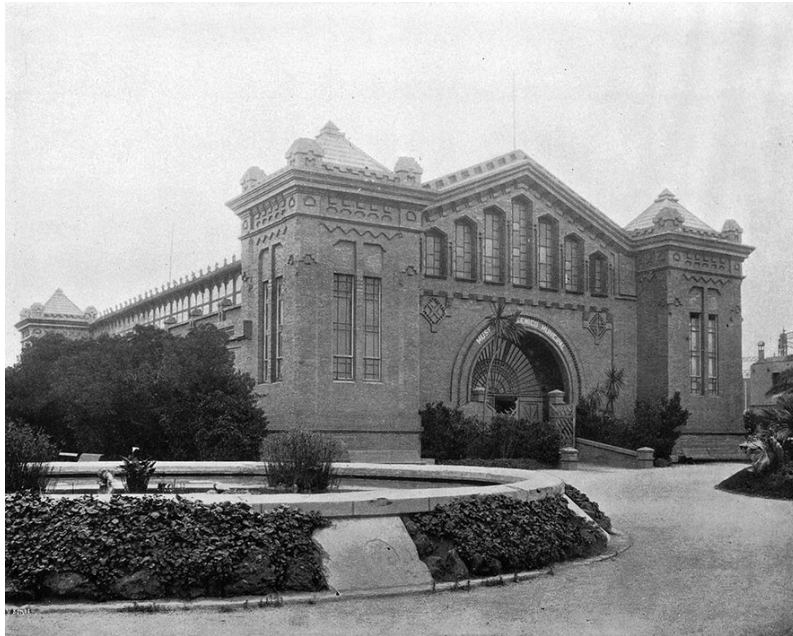


Figure 5: The former Shipbuilding Pavilion became the Museo Zootécnico.
FOTOSDEBARCELONA.COM, MZ00332

In January 1896, Darder approached the Ayuntamiento with a concrete proposal for such a museum, emphasising its potential practical applications.⁵⁵ The Museo Zootécnico should exhibit

“the diverse and important materials that animals produce in their state of life, the curious and multiple transformations of which their remains and offal are susceptible after death, and the applications for the Arts, Industries and even for the Sciences themselves that such and so many productions have.”⁵⁶

The Ayuntamiento responded positively: this initiative would serve “to remove ourselves from the foreign yoke that is still imposed on so many industries, having, as we have, elements of our own to produce and perfect them.”⁵⁷ Autarchy and national self-sufficiency already had political currency before 1898. The “desastre de 98” might have been the final push for the Ayuntamiento to finally take concrete steps to realise Darder’s proposal. One of

⁵⁵ Letter Francesc Darder to Junta, 17 January 1896; Letter Junta to Francesc Darder, 25 January 1896, AH-MCNB, 5/4.

⁵⁶ Letter Francesc Darder to Junta, 17 January 1896, AH-MCNB, 5/4.

⁵⁷ Letter Junta to Francesc Darder, 25 January 1896, 6–7. AH-MCNB, 5/4.

the remaining buildings of the Universal Exposition of 1888 was designated to house the Museo Zootécnico.⁵⁸ The former Pabellón de Construcciones Navales (Shipbuilding Pavilion) was located just outside the Parc de la Ciutadella (Fig. 5), on the other side of the train tracks, closer to the sea and connected with a bridge (called “Puente Eiffel”) to an area called “sección marítima del Parque.” To economise (and in the spirit of the comprehensive use of material), other remnants from the Exposition (glass, timber) were also “re-cycled” to construct the display cases.

On 1 January 1899, the Museo Zootécnico was inaugurated, although some sections were still not finished. The mayor and other dignitaries listened to Darder’s “detailed explanations.”⁵⁹ What was on display? There is no catalogue, so we need to rely on the newspaper accounts.⁶⁰ The sections of the museum corresponded to livestock species. They were named Hipocultura, Bovicultura, Ovicultura, and so on, detailing how horses, cows, sheep, goats, pigs, dogs, rabbits, birds, fish, silkworms, and bees could yield the greatest possible economic benefit. Technology, in the form of apparatuses and processes, was presented as crucial to maximising animal resources. To quote two examples: “In the Boviculture section, one may see the application of the bottle to ruminants by means of a special apparatus used to suckle a newborn calf and a gazelle.” “A complete beehive installation with numerous apparatuses for extracting wax and honey.”⁶¹

Additionally, there were parts dedicated to comparative anatomy, embryology, hunting, and fishing. A library and a reading cabinet completed the setup. Visitors were addressed as potential customers of the wares, but the

⁵⁸ From a history of architecture perspective: Rossend Casanova i Mandri, “El museo zootécnico de Barcelona. Uso y abuso del patrimonio efímero tras la Exposición Universal de 1888,” in *Arte e identidades culturales. Actas del XII Congreso Nacional del Comité Español de Historia del Arte, CEHA: 28, 29, 30 de septiembre y 1 de octubre, Oviedo 1998* (Oviedo, Universidad de Oviedo, 1998), 425–432.

⁵⁹ *El Diario de Barcelona*, 2 January 1899, 51; *La Vanguardia*, 2 January 1899, 2; *La Publicidad*, 2 January 1899, Ed. mañana, 3.

⁶⁰ “Museo Zootécnico,” *La Vanguardia*, 3 January 1899, 3; *El Diario de Barcelona*, 6 January 1899, 212–13. The conservative newspapers *La Vanguardia* and *El Diario de Barcelona* reported positively on the Museo Zootécnico. The republican *El Diluvio* painted an entirely different picture pointing to intrigues behind the rehabilitation of the building and issues of construction workers not being paid properly: *El Diluvio*, 4 January 1899, Ed. Mañana, 9, and 6 January 1899, Ed. Mañana, 9–10.

⁶¹ *El Diario de Barcelona*, 6 January 1899, 212–13.

target audience was “livestock farmers, agriculturalists and entrepreneurs.” These professional groups were supposed to gain inspiration for new animal-based business ideas by studying the exhibits.⁶²

An etching published in *La Vanguardia* (Fig. 6) on the occasion of the inauguration depicted visitors (mainly male) studying the contents of glass cabinets along the walls and in the central axis of the large space. In these cases, not only naturalised animals but also bird cages were displayed. By and large, the space resembled a Natural History Museum. One panel above the central glass cabinet read “Useful or pernicious birds for agriculture,” pointing to the exhibition’s applied character.⁶³



Figure 6: Inside the Museo Zootécnico,
La Vanguardia, 11 January 1899, 4; Biblioteca de Catalunya.

Where did the exhibited objects come from? There were over a dozen individual donors, including Darder’s taxidermist disciple Lluís Soler i Pujol, the Marqués de Marianao (this referred to Salvador de Samà i Torrents, a local politician, who had already donated animals to the zoo), and some Catalan businessmen. A significant part of the exhibits stemmed from Darder’s own

⁶² “Museo Zootécnico,” *La Vanguardia*, 3 January 1899, 3.

⁶³ “Museo Zootécnico del Parque,” *La Vanguardia*, 11 January 1899, 4.

natural history collection.⁶⁴ Already in 1891, he had opened the “Museo Darder” as part of his natural history business in Barcelona’s central Eixample district.⁶⁵ The list of exhibitors was much longer and included around 40 local businesses, located in the section “industries derived from animal production.” Darder had already asked in 1896 for permission to display the prizes for their products. He also proposed that the exhibitors could sell their products in the museum, provided that they were replaced immediately, with a small commission for the Ayuntamiento. The Ayuntamiento granted the first request but not the second, fearing the creation of a “monopoly.”⁶⁶

Among the animal-based products were brushes, buttons, parasols, sponges, shoes, leather, fashion items, and “pharmaceutical” products. The base materials were hair, bones, skins, shells, feathers, and fats from all kinds of animals. The term “despojos” (scraps) was mentioned several times, implying the use of every last part of the animal, even for objects of art. Already in one of his programmatic *La Vanguardia* articles from 1893, Darder had advocated this “comprehensive” use of animal material which would become one of the main characteristics of the Museo Zootécnico: “We want to demonstrate to the public the benefits of animals by showing the multiplicity of industries that derive from them and prove to them that it is more important what we discard than what we use.”⁶⁷

There were also ethnographic objects (musical instruments from “savage tribes” as well as from Europe), as well as human remains exhibited. The “cabinet of comparative anatomy” included skeletons from men and apes, “over a hundred skulls from different human races” and “Peruvian, Mexican, Egyptian and Beljuanas [sic!] mommies.” The latter refers to the taxidermy of a person from Southern Africa, referred to as “Betjuana” and later known as the “negre de Banyoles.”⁶⁸ This section may not have been accessible at all

⁶⁴ *La Vanguardia*, 8 January 1899, 1.

⁶⁵ Hochadel and Valls, “De Barcelona,” 25–26.

⁶⁶ Letter Francesc Darder to Junta, 21 April 1896; Letter Junta to Francesc Darder, 1 May 1896, AH-MCNB, 5/4. See already Valls, “El museo,” 9–11.

⁶⁷ Francesc Darder, “Exposición Industrial permanente de Zootecnia,” *La Vanguardia*, 3 October 1893, 1.

⁶⁸ The cadaver of a male person had been robbed from a grave around 1830, brought to France and “prepared,” dressed up as a “warrior.” In fact, nowadays Francesc Darder is mainly known for the “negre de Banyoles.” He purchased this object in Paris in the mid 1880s on one of his journeys. The human taxidermy became the “star object” of Darder’s natural history collection, ex-

times, as it was announced in December 1903 that it would be open to the public during the Christmas holidays.⁶⁹ This anthropological section might seem at odds with the utilitarian, animal-centred agenda of the museum. Yet it was part of Darder's private collection and surely added an incentive to visit the Museo Zootécnico.

In late January 1899, in an article for a Madrid-based agricultural journal, Tiburcio Alarcón (1859–1946, about to become one of Spain's leading veterinarians), exalted the Museo Zootécnico to the skies: "In my opinion, it represents one of the greatest and most monumental steps forward in the field of animal husbandry that has been taken in Spain in the last fifty years."⁷⁰ Being a professor in Santiago de Compostela at the time, he had not even been to Barcelona himself. In part of his article, he was simply quoting the Catalan newspapers. Alarcón's praise of Darder's achievement, whom he knew personally, was similarly hyperbolic, highlighting his intelligence and patriotic spirit. In April 1899, Bartolomé Robert (1842–1902, the famous "doctor Robert," physician and leading politician at the time), newly elected mayor of Barcelona, honoured the Museo Zootécnico with his visit.⁷¹ In May 1899, a section on "Fauna ornitológica catalana" was opened, including, for example, "a large collection of eggs from different breeds of hens," illustrating Darder's special interest in poultry.⁷²

Once the fanfares of the well-disposed newspapers during the opening months had died down, sources on the Museo Zootécnico became scarce. While the Barcelona Zoo or the Parc de la Ciutadella were described in all the tourist guides of the period, the Museo Zootécnico was never mentioned. The Statistical Handbook of the City of Barcelona dutifully mentioned the Museo year after year, providing basically the same information.⁷³ After 1900, there

hibited in different venues. In 1916, Darder bequeathed his collection to the city of Banyoles (100 km north of Barcelona) where the "negre" would form part of the municipal Museu Darder. Public criticism forced its withdrawal from public view in 1997. The skeleton was buried in Botswana in 2000. The case of the "negre" is well researched, see Miquel Molina, *Naturaleza muerta* (Barcelona: Edhasa, 2020).

⁶⁹ *La Publicidad*, 19 December 1903, Ed. vespere, 3; *La Dinastía*, 20 December 1903, 2.

⁷⁰ Tiburcio Alarcón, "Museo zootécnico en el Parque de Barcelona," *El progreso agrícola y pecuario*, 29 January 1899, 8–9.

⁷¹ *La Publicidad*, 19 April 1899, Ed. noche, 3; *La Vanguardia*, 20 April 1899, 2.

⁷² *La Publicidad*, 4 May 1899, Ed. noche, 3; *La Vanguardia*, 5 May 1899, 2.

were fewer than a handful of articles that describe visits to the Museo.⁷⁴ Most of these newspaper articles addressed the deplorable condition of the building. The Shipbuilding Pavilion was meant to last only for the 1888 Exhibition. Darder alerted to the problem of its deterioration as early as 1907. Still, it took the Ayuntamiento until November 1912 to find an alternative location: the “umbráculo” (shadow-house) in the Parc de la Ciutadella.⁷⁵ As its name suggests, this building, constructed in the late 1880s, was intended to host plants that needed little sunlight and proved inadequate to house the zoo-technical collections. The Museo Zootécnico seems to have been open until December 1918, judging by advertisements in Catalan newspapers such as *La Vanguardia*, *El Diluvio* and *La Publicidad*, which listed the opening hours (generally 9–12 and 16–18h). In the end, the collections were dispersed: Darder had already bequeathed his personal natural history collection to the city of Banyoles in 1915, and the rest probably ended up in the Museu Martorell’s collections.

The very same year that the Museo opened, in 1899, the Junta published a report for the Ayuntamiento. Darder was a member of the Junta, but the lead author was the leading Spanish naturalist Odón de Buen. The report called for the mobilisation of the Parc de la Ciutadella and its institutions (including the zoo and the acclimatisation of new species) to teach citizens how to maximise the use of Catalonia’s natural resources. The tone was similar to the utilitarian rhetoric of the Museo Zootécnico, although its emphasis was more on reaching the general public and, in particular, the “worker.” Workers should be encouraged to grow plants and raise animals at home to obtain cheap, healthy food. “The acclimatisation of domestic animals, whose maintenance is economical and easy, would help to resolve one of the issues that

⁷³ E.g., *Anuario Estadístico de la Ciudad de Barcelona – Año V – 1906* (Barcelona: Imprenta de Henrich, 1908), 394.

⁷⁴ *L’Avenç de l’Empordà*, 29 October 1910, 2. See already Valls, *Natura cívica*, 287; *La Vanguardia*, 30 January 1912, 4.

⁷⁵ “El Museu Zooteclnic,” *Poble català*, 6 November 1912, 2; “Ayuntamiento de Barcelona,” *La Vanguardia*, 6 November 1912, 2; Casanova i Mandri, “El museo zootécnico,” 428; Valls, “El museo,” 18; March, *Barcelona Freak*, 514–15.

contemporary society is particularly concerned with.”⁷⁶ This effort to produce homegrown food was necessary to rely less on imports.

Neither in this report nor in the promotion of the Museo Zootécnico was the “desastre de 98” mentioned. The rhetoric focused on economic independence from abroad, natural history and its new methods, the education and mobilisation of the population, and the use of all the resources provided by the Catalan soil to improve food production. One may interpret these efforts as an indication that the ruling classes and their naturalists felt compelled to react to the new “post-colonial” situation. The scale of products advocated was very different from the ones cultivated in the colonies. Cuba had provided, in particular, sugar, coffee, and tobacco. It is important to stress the rhetorical character of the initiatives of Darder, the Junta, and the Ayuntamiento. They reveal, in particular, their ideals (to modernise society and the economy through science and technology) but also their anxieties about maintaining political stability, keeping the unruly worker in check by instructing him to supplement his income and increase his food supply.

A Fish Laboratory in the Zoo

Darder’s Museo Zootécnico was backed by the Ayuntamiento and the conservative newspapers, and could count on the support of dozens of Catalan entrepreneurs. Yet it seems to have lost its attraction soon after its inauguration. Still, it remained open for nearly two decades. Although Darder never commented on the Museo Zootécnico’s lacklustre success, one explanation that might have crossed his mind was its lack of broader public appeal. In any case, with his next large-scale initiative, he did much better in this respect.

On 21 February 1909, a “laboratorio ictiológico,” a fish laboratory, was inaugurated on the grounds of the zoo.⁷⁷ Once more, “the mayor, accompanied by several councillors, representatives of scientific organisations and other

⁷⁶ Federico Trèmols, Silvino Thós, Odón de Buen, *Informe relativo a la organización y sucesivo desenvolvimiento de los Museos y Parque histórico-naturales de Barcelona* (Barcelona: Junta Técnica de los Museos de Ciencias Naturales, Parque Zoológico y Jardín Botánico, 1899), 25.

⁷⁷ “Una inauguración,” *La Vanguardia*, 22 February 1909, 2; “Laboratorio ictiogénico,” *Vida marítima*, 28 February 1909, 12; “Barcelona - El Laboratorio Ictiogénico,” *La ilustración artística*, 1 March 1909, 162.

dignitaries” were present, leaving no doubt that this was an initiative backed by the urban elites.⁷⁸ The zoo bred various fish species and their eggs in the laboratory’s water tanks and offered them free of charge to interested municipalities to “repopulate” the Catalan freshwater that had lost much of its stock.

Between 1910 and 1915, numerous events were celebrated in different towns across Catalonia. This “Festa del Peix” was organised around the launching of fish and fish eggs into the lake of Banyoles and the rivers Ter, Cardener, Anoia and Fluvià. Local authorities and schools participated, making the Festa del Peix a popular event with considerable media repercussion. An itinerant exhibition on “Piscicultura and Pesca” (“Fishculture and Fishing”) supported the initiative, displaying both equipment and technologies, as well as live fish in aquariums. The exhibition was first shown in the Catalan towns of Banyoles, Manresa, and Terrassa, and eventually, for over a year (December 1912–December 1913), in the Castell de Tres Dragons, another building of the 1888 Exhibition (the café-restaurant) situated in one of the corners of the Parc. In a similar spirit to the Museo Zootécnico, this exhibition provided a showcase for commercial products from the fishing industry but was also intended to engage the visiting public in related activities.

The pisciculture initiative has been studied in depth by Laura Valls. As she argued, the Festa de Peix needs to be seen in the context of Catalonia’s industrialisation as an attempt to counter the destruction of fish stocks caused by contamination and overfishing.⁷⁹ Valls also showed that this Barcelona-based initiative was not an outlier within the European context but rather echoed a renewed interest among naturalists and governments across Europe in “farming the waters” in the last third of the nineteenth century.⁸⁰ Once more, Darder was following in the footsteps of Graells, who was among the first Spanish naturalists to advocate fish farming in the mid-1860s, and who, in turn, picked up ideas from Isidore Geoffroy Saint-Hilaire.⁸¹ Fish farming was

⁷⁸ *Hojas selectas*, January 1909, 455; also see *Diario de Barcelona*, 22 February 1909, Ed. tarde, 2563.

⁷⁹ Valls, *Natura cívica*, 239–348.

⁸⁰ Laura Valls, “Tràfic global de peixos. Piscicultura al Zoo de Barcelona a principis de segle XX,” *Actes d’Història de la Ciència i de la Tècnica* 16 (2023): 71–93.

⁸¹ Mariano de la Paz Graells, *Manual práctico de piscicultura: ó, Prontuario para servir de guia al piscicultor en España, y á los empleados de la administración pública en nuestras aguas dulces y sa-*

conceived as a scientific solution to the problem of declining fish populations, a means of increasing food supplies, and a source of income for the middle and lower classes by promoting an auxiliary industry to agriculture.⁸²

As Valls pointed out, the pisciculture initiative may also be interpreted as an attempt by the Junta to mitigate the severe social tensions in Catalonia at the time, both by improving the economic situation of the less affluent classes and by “morally educating” them.⁸³ These tensions between the political authorities, the military, and the Catalan bourgeois elites on the one hand and the working class, anti-clerical republicans, and anarchists on the other hand reached a bloody climax in late July 1909 in the so-called Setmana Tràgica, a brutally suppressed uprising.

Should the pisciculture initiative rather be seen in terms of acclimatisation or zootechnics? Darder’s idea was to “repopulate” the Catalan waters with both autochthonous and allochthonous species of fish. In practice, though, mostly “foreign” fish species were released, totalling around 45,000 specimens and many more fish eggs. In 1913, Darder published a “Fishing chronicle” detailing individual catches, which was clearly propagandistic and meant to document the success of his scheme. Yet it is hard to say whether the pisciculture initiative had any substantial effect on the dwindling fish populations of the Catalan rivers. The case is different for the Lake of Banyoles. Darder seems to have introduced at least six “foreign” species: Rainbow trout (*Oncorhynchus mykiss*), Brown trout (*Salmo trutta* L.), Common Carp (*Cyprinus carpio* L.), Black Bullhead (*Ameiurus melas*), Pumpkin-seed sunfish (*Lepomis gibbosus*), and the Rudd (*Scardinius erythrophthalmus*).⁸⁴ Apart from Darder’s initiative in the early 1910s, there was a second wave of launching “non-native” fish species in the 1950s.

Starting around the year 2000, Catalan ecologists tried to assess the impact of the introduction of allochthonous species in the course of the twentieth

ladas (Madrid: D. E. Aguado, 1864); Josep Maluquer, Piscicultura. Enciclopèdia Catalana. Vol. 12 (Barcelona: Editorial Catalana, 1919), 137; Isidore Geoffroy Saint-Hilaire, *Acclimatation et domestication des animaux utiles* (Paris: La Maison Rustique, 1861), 417.

⁸² Darin Kinsey, “Seeding the Water as the Earth: The Epicenter and Peripheries of a Western Aquacultural Revolution,” *Environmental History* 11, no. 3 (2006): 527–66, on 536.

⁸³ Valls, *Natura cívica*, 242, 283, 309–314.

⁸⁴ Francesc Darder, *Piscicultura: Crònica piscatoria* (Barcelona: Hijos de D. Casanovas, 1913).

century. They found that the two species of trout seem to have disappeared, and the Black Bullhead is scarce. The other three species introduced by Darder are still extant; in particular, the Pumpkinseed sunfish is abundant, and the Rudd and the Common Carp remain common. Of the sixteen species extant at the lake, only four are “natives.” In terms of the biomass of the Lake of Banyoles, it is estimated that two-thirds or more stems from introduced species. The ecologists thus conclude that past launches had a major impact on the lake’s fish population.⁸⁵ It is worth noting, though, that only in the early twenty-first century was this described in the language of “invasive species,” distinguishing between “native” and “alien” fish species.

The “laboratorio ictiológico,” the “Festa del Peix” and the itinerant exhibition represent the last major initiative of Darder in his quest to turn the Barcelona Zoo into a centre of acclimatisation. In terms of popular appeal (and geographical reach), it was more successful than the Museo Zootécnico. It aroused the interest of large audiences not only in Barcelona (at the exhibition in the Castell dels Tres Dragons) but also across many parts of Catalonia.

Conclusions

Francesc Darder had been formed as a practitioner of applied natural history in the 1870s and 1880s, running his own business, publishing journals and booklets, and working as an animal expert for Martí-Codolar in the Granja Vella. In this context, through his readings and also his regular journeys to Paris, he imbibed ideas on acclimatisation. When he became the director of the Barcelona Zoo in 1892, he conceived of it as “the foundation stone of the future Zoological Park for acclimatisation and naturalisation.” To pursue this goal, Darder launched several initiatives in and around the Zoo over the following two decades. He pitched his applied natural history agenda to political authorities and the general public through concepts such as acclimatisation, zootechnics, and “useful animals.” These terms should rather be understood as buzzwords that suggest a scientific basis. A rhetoric of patriotism,

⁸⁵ Emili García-Berthou and Ramon Moreno-Amich, “Introduction of exotic fish into a Mediterranean lake over a 90-year period,” *Archiv für Hydrobiologie* 149 (2000): 271–84; Joaquim Carol, Lluís Benejam, Quim Pourovira, Lluís Zamora Hernández and Emili García-Berthou, “Noves introduccions i poblament actual de peixos a l’estany de Banyoles,” *Butlletí de la Institució Catalana d’Història Natural* 71 (2003): 136–39, 137; Valls, *Natura cívica*, 240.

progress, and utility undergirded his promotional discourse. In his writings, Darder rarely addressed political or social questions. Yet his programme of applied natural history can only be fully understood within the historical context of the fin-de-siècle. The concrete shape that his initiatives took was determined by pressing political circumstances (Spain's loss of its last colonies in 1898, increasing social tensions in Catalonia culminating in the Setmana tràgica in 1909), a favourable local context (the Parc de la Ciutadella hosted the zoo and other institutions dedicated to natural history), and personal preferences (poultry).

Darder's efforts were supported by the Ayuntamiento, sections of the Catalan bourgeoisie and their businesses, conservative newspapers, as well as acclimatisers, agriculturalists, and animal breeders: Lluís Martí-Codolar, Salvador Castelló, later on Pere Màrtir Rossell i Vilar, the entrepreneurs who exhibited in the Museo Zootécnico, and Darder's colleagues from the Junta. Collections of different types (live and dead animals), all kinds of materials (animal parts and products, residues, fish eggs), but also technologies (artificial incubators, "ovoscopios," milk bottles for calves, fishing equipment) oscillating between the instructive and the commercial, formed the basis of this Catalan variant of applied natural history. Differences between the "classical" idea of acclimatisation and zootechnics did not interest Darder. Any animal, "exotic" or not, that promised economic benefit was to be bred and exploited. The animal was understood as an industrial product, including its "total" use.

It is difficult to assess the economic impact of the initiatives promoted by Darder, but by and large, it seems to have been limited. The focus of his breeding efforts was poultry, and Martí-Codolar's "chicken factory" proved highly productive. Darder undertook no serious attempts to breed larger animals such as camels, lamas, or ostriches, which had been at the core of the acclimatisation rhetoric of the mid-nineteenth century. The public interest in the Museo Zootécnico quickly waned after some initial enthusiasm. The pisciculture initiative gained momentum thanks to the Festa del Peix, celebrated in many Catalan towns. It fizzled out after about five years, yet the (long-term) impact on the fish population was considerable.

In his obituary, biologist Ramón Turró i Darder (a cousin of Darder) recalled tongue-in-cheek an episode in which Darder replaced a popular monkey cage in the zoo with an "instructive" installation of silkworms. Turró

thus illustrated how Darder could not let go of his utilitarian ideas, ignoring the expectations of the visitors eager to see “lions, tigers and panthers that roared night and day.”⁸⁶ Yet it would be misleading to characterise Darder as somebody out of touch with the public. As this article has shown, Darder, the Junta, and the Ayuntamiento were well aware of the need to promote their initiatives. The breeding programmes were supported by publications, auctions, supposed crowd-drawers such as exhibits of human remains at the Museo Zootécnico, public festivities (“Festa del Peix”), public lectures for farmers, and large-scale exhibitions. *La Vanguardia* served as Darder’s mouthpiece.

The detailed description of Darder’s initiatives brought to light its numerous publics. Apart from the zoo visitors themselves, there were politicians, animal dealers, farmers, breeders, fishermen, entrepreneurs, and businessmen of all sorts, as well as workers and other city-dwellers of modest means. Darder’s aim was not (primarily) to entertain them, but to inform them about recent advances, educate and “inspire” them, in short, win them over to enlist in the “patriotic” enterprise of relaunching Catalonia’s animal-based industries.

In this scheme of applied natural history, the function of the Barcelona Zoo was much more than just that of an institution that exhibited “exotic animals.” It aspired to be a centre of acclimatisation, staging auctions, and hosting chicken coops and a fish laboratory. Its initiatives reached beyond the walls of the Parc de la Ciutadella, to the nearby Museo Zootécnico and even to the Catalan countryside.

The case of the Barcelona Zoo during the mandate of its first director allows us to draw a more complex picture of the acclimatisation movement. This article contributes to the revisionist historiography that claims this movement did not end in 1870. Yet the early Barcelona Zoo also provides an intriguing example of a European “post-colonial” zoo that rather looked inward, promoting self-sufficiency and autarchy, maximising the natural resources of Catalonia. Reconstructing Darder’s notion of an acclimatisation zoo helps us understand how much the idea of what constitutes a zoo has changed.

⁸⁶ Ramón Turró, “En Francesc Darder,” *La Veu de Catalunya*, 16 April 1918, Ed. Matí, 9.

Shortly after Darder's death, Rossell still described the Barcelona Zoo as "an animal production centre."⁸⁷ Yet this changed radically in the 1920s. The zoo began charging entry fees in 1927 and focused much more on the expectations of the general public. Rossell and Jeroni Darder bid goodbye to Francesc Darder's original ideas, stating in 1928, that "farm animals, chickens, pigeons, ducks, geese and rabbits belong to farms or schools and live-stock farms." These creatures had only been kept to supplement the budget, but with the new source of income, the admission tickets, "they could be dispensed with."⁸⁸

Acknowledgements

I would like to thank the two anonymous reviewers who provided essential feedback, as well as Santiago Aragón, Damià Gibernet, José Antonio Mendiábal, José Pardo-Tomás, Benedetta Piazzesi, and Laura Valls Plana for their numerous and always helpful comments and criticisms, including many pointers to sources. This article is part of the project I+D+i PID2020-112514GB-C21, financed by AEI/10.13039/501100011033.

Competing Interests

The author declares that there are no conflicts of interest regarding the publication of this paper.

⁸⁷ Rossell, "El Parc de Barcelona."

⁸⁸ Pons, *El parc zoològic*, 97.