

FELIPE POEY, HYPERBOLE, AND THE MYTH OF THE “ISOLATED GENIUS” AMONG SPANISH AND LATIN AMERICAN SCIENTISTS

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Abstract

Felipe Poey y Aloy was a Cuban naturalist and intellectual who greatly contributed to the advance of science in Cuba. Despite being an autodidact he showed a great deal of competence as a scholar, teacher, and organizer of intellectual institutions in both the public and private spheres. Although being portrayed as an almost “isolated genius” he maintained a very broad and vigorous network of communications with scientists all over the world. He always kept an open mind and adapted to new scientific ideas. Although the narrative of his life and accomplishments has been the subject of much hagiography we contend that such narratives have obscured, rather than illuminated, his contributions to society and the social, political, and economic contexts under which he had to develop his work.

Resumen

Felipe Poey fue un naturalista e intelectual cubano que, en gran medida contribuyó al desarrollo de la ciencia en Cuba. A pesar de ser autodidacta, Poey demostró ser muy competente como académico, maestro y organizador de instituciones intelectuales tanto públicas como privadas. A pesar de ser representado como un “genio aislado”, Poey mantuvo una amplia y muy activa red de comunicación con científicos de todo el mundo. Él siempre mantuvo su mente abierta a nuevas ideas científicas. Sin embargo, la narrativa de su vida y sus logros ha sido objeto de mucha hagiografía. Este artículo sostiene que tales narrativas, en vez de iluminar, han opacado las contribuciones de Poey a la sociedad y al contexto económico político y social en el que él tuvo que desarrollar su trabajo.

Introduction

There are many hagiographies of Spanish or Latin American scientists who lived before the 20th century written by either Spanish or Latin American authors and published as recent as the middle of the 20th century. They are in the literary tradition of religious biographies, particularly prevalent among Catholic authors who mixed both Spanish mysticism as well as nationalism. Parts of those narratives include a subtext in which the scientists are described as “isolated geniuses” who achieved great scientific accomplishments almost exclusively out of some sort of unprecedented inborn virtuosity while being more or less isolated from the scientific networks of their times.

Glick and Quinlan (1975) argued that the myth of the isolated genius in Spanish science was false. Others (Beddall 1983) have stated that “not all Spaniards, or even all Spanish geniuses, are or feel themselves to be isolated...” but that in some cases (e.g., Félix de Azara¹) they worked “under circumstances of social, scientific, and geographic isolation that by most standards would be considered fairly extreme.”

Sometimes the Cuban naturalist Felipe Poey has also been heralded as an example of such isolated geniuses (e.g., Carbonell y Rivero 1928:7-9). The aim of this paper is to discuss the circumstances of the development of Poey’s work within both the international and Cuban

¹ b. Barbuñales, Huesca, Spain, 18 May 1746; d. Barbuñales, 20 October 1821.

context from a scientific networking viewpoint. We will argue that despite his very valid and important achievements as a scientist, the way he has been portrayed by some authors until relatively recently (1) did not help to better understand the real significance of his achievements, (2) deemphasized the way he networked his communications with other intellectuals his whole life, and (3) obscured the very fact that he was a very open-minded, autodidact intellectual who did the best he could to keep up to date with new scientific ideas under the circumstances under which he lived.

Poey's Life and Career

For the purpose of the discussion on the impact of hagiographies on the perception of Poey as a scientist in general and as an “isolated genius” in particular, we summarize below the biographical aspects of Felipe Poey relevant to that discussion. For a more complete biography of Poey that includes numerous primary sources see González López (1999)².

Felipe Poey y Aloy (hence Poey, po'-ay)³ was the son of Juan Andrés Poey y Lacase⁴, a Frenchman who while in Cuba was involved with his family in slave trade and María del Rosario Aloy y Rivera⁵ of Spanish and Cuban ancestry and a member of the Cuban creole gentry through the ownership of plantations. In 1804, at the age of five, Poey went with his family to Pau, France, a small town in southwestern France not far from the border with Spain. There Poey started his primary education and after the death of his father, less than two years after they arrived to France, his mother moved back to Havana, leaving Felipe in a boarding school in Pau for three more years.

While there he was struck by polio, which partially paralyzed the right side of his body, after which he returned to Cuba. That condition obligated him to write with his left hand and in vertical fashion while his drawings were based on outlines drawn directly from placing the specimens on a piece of paper which resulted in many life-size illustrations. Additionally this ailment impaired him from fieldwork, making him reliant on others to secure specimens for his work as naturalist (Boss and Jacobson 1975, Romero 2007). Yet, this very disability may have decanted his interest for nature at an early age: as an infant he spent long time on his belly watching the activities of ant colonies (Sanchez Roig 1955:50).

Back in Havana, he attended the *Real Seminario de San Carlos y San Ambrosio*. This seminary was open to people interested on either following a career in the clergy or pursuing secular careers such as law, political economics, mathematics, and the physical sciences. Another characteristic of that seminary was that they rejected scholastic approaches to teaching. There, Poey studied philosophy under Félix Varela y Morales⁶ a distinguished priest, politician, philosopher, and educator who introduced new teaching methods in Cuba while establishing the first teaching laboratories for physics and chemistry in that country (Altshuler and Baracca 2005).

Poey received his bachelor's degree in law in 1820. That year he joined the *Real Sociedad Económica de La Habana* (formerly *Sociedad Patriótica*, later *Sociedad Económica de Amigos del País*). This was a learned society of Cubans interested in many subjects but mostly economic, cultural, and social aspects of the island. One of the major activities of this society was to send to other countries commissions that could bring back the latest advances in many different areas of knowledge. Among their major accomplishments were the establishments of the first public library in Cuba, the botanical gardens, the *Escuela Nacional de Bellas Artes “San Alejandro”*, and a number of educational reforms. For a man with the interests of Poey, the *Sociedad* was a place to be, particularly because his former teacher and mentor, Félix Valera, was an active

² Additional general biographical information on Poey can be found in Jordan 1899, Sánchez Roig 1937, Chardon 1949, Vivanco y Díaz 1951, Cruz 1979.

³ b. Havana, Cuba, 26 May 1799; d. Havana, 28 January 1891.

⁴ b. Estos, Pyrénées-Atlantiques, southwestern France; d. Pau, Pyrénées-Atlantiques, France, 26 February 1806.

⁵ b. Havana, Cuba, 6 October 1783; d. ?

⁶ b. Havana, Cuba, 20 November 1788; d. St. Augustine, Florida, U.S.A., 27 February 1853.

member of that institution. It was then when he began making collections of plants and animals. It was also Valera who encouraged Poey to contribute articles to *El Observador Habanero*, an ephemeral periodical (1820-1822) devoted to politics, the sciences, and literature. There he began his career as a popular science writer, something he would continue doing for the rest of his life.

To please his mother he went to Madrid, Spain, to enhance his studies in law and received his degree with honors as doctor of law at the *Universidad Complutense* in 1822. For a while he taught law in the *Real Academia de Jurisprudencia y Legislación* in Madrid, which at that time had a strong liberal leaning along the lines of his mentor Varela. He marginally became involved in politics (he was a liberal sympathizer). At that time the liberal movement of Spain was a bourgeois, nationalist one characterized by an anti-absolutist monarchism, somewhat anticlerical, and welcoming to the idea of the French Enlightenment. In 1823 after the French army invaded Spain and restored Ferdinand III as an absolutist monarch, many liberals fled Spain, mostly for London and France. Varela, who had moved to Spain in 1821 after being chosen to represent Cuba before the Spanish parliament, fled for Gibraltar first and the United States later. Poey returned to Cuba that year and in 1824, married⁷, and decided to become a full-time naturalist. That was something he could afford despite his and his wife's somewhat modest wealth. By that time (1822) the Spanish parliament (*Las Cortes*) had commissioned the travel by some Spanish naturalists to explore Cuba, Puerto Rico, and the Philippines to survey their natural resources. They also established the first professorship (*cátedra*) of natural history in Havana and to occupy that position the botanist, politician and writer Ramón de la Sagra⁸ was named (Barreiro 1944:120).

Poey never practiced law, a very lucrative profession in Cuba at that time, and supported himself by teaching at the *Colegio of San Cristobal de La Habana o de Carraguo*, well known for its pedagogical innovations. There he taught geography, Latin, and French at the primary school level.

In 1826 Poey traveled to Paris, France, to officially study law at *La Sorbonne*. Yet, he had another agenda since he carried with him specimens of plants, insects, and other animals, including 35 specimens of Cuban fishes in a barrel of brandy plus 85 drawings of fishes from Cuba. Although he might have obtained a law degree, he spent a considerable amount of time working with the famous naturalist Georges Cuvier⁹ at the *Muséum national d'Histoire naturelle*. At that time Cuvier and his student Achile Valenciennes¹⁰ were working on the encyclopedic *Histoire naturelle des poissons* (The Natural History of Fishes), which would end up being a 22-volume publication and the most comprehensive reference on fishes for many years. Poey's information about the Cuban fishes was incorporated into Cuvier and Valenciennes's gigantic work. In addition to his work on fishes while in France, he was very active in other scientific circles becoming a founding member of the *Société Entomologique* in 1827. While in France he published *Centurie des Lépidoptères de l'île de Cuba* (a monograph on the butterflies and moths of Cuba, Paris, 1832)¹¹.

After his return to Havana in 1833 Poey devoted himself entirely to the study of natural history. It is possible that by that time his mother had passed away and he abandoned any

⁷ He married Maria de Jesús Aguirre y Hornillos with whom he had six children. His first son, Andrés Poey y Aguirre (b. La Habana, Cuba, 15 November 1825; d. Paris, France, 4 January 1919) was a Paris-educated meteorologist, naturalist, and archaeologist. He was the director of the *Observatorio Físico-Meteorológico de La Habana* and during the reign of Maximilian he was the founder of an establishment of the same kind of facility in Mexico. He practiced positivism, a quite popular philosophical current in Cuba's second half of the nineteenth century.

⁸ b. A Coruña, Galicia, Spain, 8 April 1798; d. Neuchâtel, Switzerland; 23 May 1871.

⁹ b. Montbéliard, France, 23 August 1769; d. Paris, France, 13 May 1832.

¹⁰ b. Paris, France, 9 August 1794; d. Paris, 13 April 1865.

¹¹ The full title was *Centurie des lépidoptères de l'île de Cuba: contenant la description et les figures coloriées de cent espèces de papillons nouveaux et peu connus. représentés d'après nature, souvent avec la chenille, la chrysalide et plusieurs détails microscopiques.*

pretense of pursuing a career in Law. He did a number of drawings of specimens with his associate, Juan Cristóbal Gundlach¹², while discovering many new species of mollusks that are included Ludwig Karl Georg Pfeiffer's¹³ *Monographia Heliceorum Viventium* (1847). In 1836 he published the first of his 18 editions of the *Compendio de la Geografía de la Isla de Cuba*, a textbook on the geography of Cuba.

In 1842 Poey founded the *Museo de Historia Natural de La Real y Pontificia Universidad de La Habana* (the museum of natural history of the University of Havana) after several years of planning. The University of Havana was run by a Dominican order and was not secularized until 1842 (Romero 2014) and it was not until 1863 that the faculty of sciences was created. Because of shortage of funding they lack labs. On 1876 the university was reinvigorated and the library and a larger natural history museum were organized (Álvarez Conde 1958:204, Pruna 1994)¹⁴. The very same year the museum was founded (1842), he was appointed professor of comparative anatomy and zoology at the university despite the fact that he lacked formal education in the natural sciences (Sanchez Roig 1955:36-37). By the 1850's he was already recognized as the most erudite naturalist in Cuba. Between 1851 and 1861 he published the two volumes of his *Memorias sobre la Historia Natural de la Isla de Cuba*¹⁵.

In 1861 Poey and his son Andrés appear as founding members of the *Real Academia de Ciencias Médicas, Físicas y Naturales de la Habana*¹⁶ envisioned as a place for experimental learning. The creation of the *Academia* was the result of a number of political and personal circumstances. That institution was not really established to advance science in Cuba but rather to improve relations between the Cuban elites and the metropolis. The Poey's were two of the five members from the natural history section. Other five members were from pharmacy and twenty were physicians.

In 1863 he was commissioned by the *Capitán General* (top representative of the Spanish government) of Cuba to gather specimens for the collections of the *Museo de Historia Natural de Madrid*. That took place during a period (1859-1866) when the *Museo* was making a number of efforts to increase its collections from abroad with uneven success (Barreiro 1944:285-300). In that same year he was appointed Chair of botany, mineralogy, and geology, and later published the *Repertorio Físico-Natural de la Isla de Cuba* (1865-1868). This was a compilation of articles on various fields of natural history by him and other Cuban naturalists. The ichthyological papers were reprinted in the *Anales de la Sociedad de Historia Natural de Madrid*, under the title *Synopsis Piscium Cubensium*, or *Catálogo razonado de los Peces Cubanos* (Annotated Catalog of the Fishes of Cuba, 1868).

By the 1870's he was a very prolific and accomplished author with publications not only on ichthyology, entomology, and malacology, but also in the areas of anthropology, geography, and geology (he also published poems). Those publications had been written in Spanish, French, and English and had been printed in both Cuba and abroad¹⁷.

In 1873 Poey was appointed Dean of the Faculties of Philosophy, Letters, and Sciences, but in 1880, he retained only the post of Dean of Sciences. In his last years at the university, he taught Vertebrate Zoology and the Zoography of the Vertebrates. His greatest work was probably *Ictiología Cubana*. The text, originally written in French, was completed in 1877 and the Atlas in

¹² née Johannes Cristoph Gundlach, b. Marburg, Germany, 17 July 1810; d. Havana, Cuba, 14 March 1896.

¹³ b. Kassel, Hesse, Germany, 4 July 1805; d. Kassel, 2 October 1877.

¹⁴ That museum was moved to its current location at the *Universidad de La Habana* in 1930 and was renamed *Museo de Historia Natural Felipe Poey*.

¹⁵ This work is complicated to cite, particularly when it comes to dates. This is a collection of papers in two volumes. The first set of papers was published between 1851 and 1854 and the second set between 1858 and 1861.

¹⁶ Replaced in 1962 by the *Academia de Ciencias de Cuba* created in 1962. Today it publishes the scientific periodical *Poeyana*.

¹⁷ Despite cataracts at old age, together with his partial paralysis, he never stopped writing until his death. He also published on archaeology, philosophy, linguistics, and jurisprudence while modernizing the medieval methods of education in 19th century Cuba (Dihigo 1915).

ten large folio volumes plus a supplement, in 1878. The atlas, drawn by him, consisted of 1040 plates with 1300 figures in color and natural size (except sharks) illustrating 758 species of Cuban fishes. The manuscript was presented at the Amsterdam Fair in 1883 and gained the author a gold medal and honorable mention. King William III conferred on him the decoration of the order of the "Lion Neerlandais" (Dutch Lion) and the King of Spain distinguished him with the title *Comendador de la Order de Isabel la Católica* (Commander of the Order of [Queen] Elizabeth the Catholic).

Although the British Museum and the Smithsonian Institution both bid high prices for the work, Poey preferred to sell it at a much lower price to the Spanish government, which acquired it in 1885 and deposited at the *Biblioteca de Ciencias Naturales* at Madrid (Barreiro 1944:348). In the 1930's, the government of President Gerardo Machado in Havana set aside \$10,000 to arrange for its publication, and although two prominent naturalists, Dr. Carlos De La Torre y Huerta¹⁸ and Felipe García Cañizares¹⁹, worked to prepare it for publication, this was prevented, as Álvarez Conde (1958: 232) writes, by "crisis económicas sucesivas" (successive economic crises). In 1955, under the editorship of Mario Sanchez Roig and Federico Gomez de la Maza, a first volume in Spanish of 372 pages appeared in Havana, containing an introduction and part of the text (Sanchez Roig 1955). Further efforts were planned to print Poey's *Ictiología* (Duarte Bello 1962) but it was not finally published in its entirety until 2000 (Poey 2000).

Poey's Networking

There is little question that Poey developed an extensive academic network around the world through correspondence, membership, and other means that included, but was not limited to, the following institutions (alphabetically): Academy of Natural Sciences of Philadelphia (Philadelphia, Pennsylvania), American Academy of Arts and Sciences (Cambridge, Massachusetts), British Museum (London, England), Buffalo Society of Natural Sciences (Buffalo, New York), Entomological Society of Philadelphia (Philadelphia, Pennsylvania), Essex Institute (Salem, Massachusetts), *Königliche Akademie der Wissenschaften* (Berlin, Germany), Museum of Comparative Zoology at Harvard University (Cambridge, Massachusetts), Lyceum of Natural History of New York (New York), *Real Academia de Ciencias Exactas, Físicas y Naturales* (Madrid, Spain), *Real Academia de Ciencias y Artes de Barcelona* (Barcelona, Spain), *Real Museo de Ciencias Naturales* (Madrid, Spain), *Real Sociedad Española de Historia Natural* (Madrid, Spain), Royal Zoological Society of London (London, England), *Société Entomologique de France* (Paris, France), and the Smithsonian Institution (Washington, DC). He even published some of his works in the journals of some of those institutions.

In those institutions, as well as with independent naturalists, he maintained an extensive correspondence with many scientists from those countries as well as from Belgium and Switzerland. A list of those scientists can be found in Vivanco y Díaz (1951), De La Torre (1942:314-315), and González Lopez (1999:186-211, 239). Those scientists were mostly ichthyologists, entomologists and malacologists. His letters were very detailed showing a great deal of competence on what he was doing²⁰. He also hosted a number of foreign scientists visiting Cuba such as Juan Cristóbal Gundlach, David Starr Jordan²¹, Carl Friedrich Eduard Otto²², Ludwig Karl Georg Pfeiffer, and Charles Wright²³. Some of them wrote later on about Poey as both as a scientist and as a person.

¹⁸ b. Matanzas, Cuba, 15 May 1858; d. 19 February 1950, Havana, Cuba.

¹⁹ b. Sancti Spiritus, Santa Clara, Cuba, 14 July 1872; d. 1953.

²⁰ Thanks to Susan Sanctis of the Museum of Comparative Zoology at Harvard University for providing copies of some of the letters written by Poey to H.A. Hagen

²¹ b. Gainesville, New York, U.S.A., 19 January 1851; d. Stanford, California, U.S.A., 19 September 1931. He was one of the towering figures of ichthyology and university administration of his time.

²² A German botanist and malacologist, b. 1812; d. 1885.

As mentioned earlier, within Cuba he was a founder/president/member of numerous institutions in addition to his university posts. Furthermore he was the public face of science in his country through his numerous articles printed in the popular press of the island²⁴ (see Poey y Aloy 1888).

Posthumous Recognition

Another measure of whether or not his work was appreciated during his lifetime is in the recognition he received shortly after his death. On 5 June 1907 his remains were exhumed from the Colón cemetery in Havana and reburied in the vestibule of the building of the Faculty of Sciences, which was named in his honor. On 15 January 1909, a mausoleum was raised there with a long Latin inscription and a marble bust of the scholar. On 26 May 1913, the *Sociedad Cubana de Historia Natural "Felipe Poey"* was founded and lasted until 1962. It counted as members some of Poey's students and admirers and dedicated itself to the study of zoology, botany, anthropology, mineralogy, geology, paleontology and agronomy, roughly the same areas of interest for Poey (Mestre 1918). It published between 1915 and 1961 the *Memorias de la Sociedad Cubana de Historia Natural Felipe Poey*, which contained some of the most significant studies of Cuban natural history (Montané 1918). Today the *Academia Nacional de Ciencias de Cuba* publishes a periodical titled *Poeyana* in his honor.

Adoption to New Ideas

It is not uncommon that some scientists lose standing during their lifetime among their peers by refusing to accept new ideas that later become mainstream. The most revolutionary and controversial biological idea of the 19th century was the theory of evolution by means of natural selection.

Although ambivalent at the beginning (Pruna 1994), Poey went on to become an evolutionist based on his studies of blind cave fishes and his belief that cave colonization was not the result of "accidents" but rather an active process (Romero 2007). When the works of Charles Darwin²⁵, Thomas Henry Huxley²⁶, and Herbert Spencer²⁷ were published, he embraced them enthusiastically. He seemed to be particularly impressed with Spencer (Jordan 1899) probably because of Spencer's progressionist ideas. We must remember that Poey was a disciple of Cuvier, a staunch creationist, and an admirer of another creationist and Darwin's rival, Jean Louis Rodolphe Agassiz²⁸. Yet, the Cuban naturalist read the arguments after Darwin's publication of *The Origin of Species by means of Natural Selection* (1859) and started to shift his opinion about the notion of evolution.

Thus, by 1868 he started to show ambivalence toward creationism and by 1886 he had fully embraced evolutionary ideas, a transformation of thought that was parallel to changes in his own religious ideas from being a Catholic to become agnostic and later an atheist (Pruna and González 1989:35, 63-64, 181). For Poey this intellectual development took place rather smoothly. After all, the introduction of Darwinian ideas in Latin America was progressive and without much resistance at least among academic circles (for an overview of this issue see Pruna and García González 1989).

As Jordan (1884) stated "There is no characteristic of Professor Poey's work more striking than his entire lack of prejudice, or, in other words, his teachableness. (...) Among all the eminent zoologists of our time, I know of none so ready to learn, whatever the source from which

²³ American botanist and collector, *b.* Wethersfield, Connecticut, U.S.A., 29 October 1811; *d.* Wethersfield, 11 August 1985.

²⁴ see De La Torre (1942), González Lopez (1999), and Vivanco y Díaz (1951), for the titles of those publications.

²⁵ *b.* Shrewsbury, England, 12 February 1809; *d.* Downe, Kent, England, 19 April 1882.

²⁶ *b.* Ealing, west London, England, 4 May 1825; *d.* Eastbourne, England, 29 June 1895.

²⁷ *b.* Derby, England, 27 April 1820; *d.* Brighton, England, 8 December 1903.

²⁸ *b.* Motier-en-Vully, Switzerland, 28 May 1807; *d.* Cambridge, Massachusetts, 14 December 1873.

information may come. He has no theories which he is not ready to set aside when a better suggestion appears.”

Discussion and Conclusions

Autodidactism

Despite the fact that Poey's education in law were of first order in three different institutions of higher education in three different countries, he never had a formal education on what was his real profession: naturalist, and that is not surprising. The very term biology was not used for the first time until 1802 (McLaughlin 2002). In fact, for the first half of the nineteenth century there were very few people around the world making a living out of being biologists, and there were usually associated with either universities or museums of natural history, and that happened only in European countries and the United States. Therefore, during Poey's lifetime to acquire a formal education in life sciences was far from a guarantee for a steady income. The profession of biologist was yet to be institutionalized globally and more so in Cuba. Although he spent time with some of the most distinguished zoologists of his time he seemed to learn more by intellectual osmosis and reading than by any other method.

Even in Cuba he lacked some role models to follow. For example, his only real predecessors in the study of Cuban fishes were Antonio Parra y Callado²⁹ who published in 1787 *Descripción de Diferentes Piezas de Historia Natural* (Description of Different Items of Natural History) describing 71 species of fishes and Ramón de la Sagra who published *Historia física, política y natural de la Isla de Cuba* (Physical Political, and Natural History of the Island of Cuba) (1838 for the French edition and 1857 for the Spanish edition)³⁰. Parra had been commissioned to collect plants and animals to be sent to the *Reales Gabinetes de Historia Natural y Jardín Botánico* in Madrid for which he was paid (Chardon 1949:231, García González 1995) and his book, although interesting for its time, was a far cry from the type of methodology for scientific descriptions that Poey had to use during his time. Parra's book was rather an inventory of species with some narrative about their natural history while Poey had to use the rigor imposed after Linnaeus's 10th Edition of his *Systema Naturae* (1758). As per de la Sagra's book, as mentioned earlier, the section on fishes was written by someone who had never been to Cuba.

When it comes to colleagues in Cuba during his lifetime, things were not much better even when he was a professor at the University of Havana. According to Jordan (1884) by that time there were only two students pursuing botany and probable the same number in zoology. The library resources Poey used in Cuba were mostly his and he had the only zoological laboratory in the island.

Isolation

Poey would have been the first to recognize that he had a wide network inside and outside Cuba and that his intellectual background was very wide and shaped by whatever he could learn by means of either reading published literature or through personal correspondence. Because of the dates and places of birth and death he was technically a Spaniard, not matter how Cuban he felt. That was reinforced by the fact that during his 91 years of life he spent only a few years outside Cuba (in France and Spain). Yet, he considered himself “cosmopolitan.” Jordan (1922: vol. 1: 285) who met him in 1884 mentioned that he used to say: *Comme naturaliste je ne suis pas espagnol — je suis cosmopolite*³¹.

In terms of historical periods Poey fits into the second of the tree periods described in Basalla (1967) when it comes to the history of science in developing countries. For Basalla there were

²⁹ b. Tavira, Portugal, 27 June 1739; d. ? (García González 1989, pp. 79-82).

³⁰ The section of fishes is on volume 4, pages 145-255, and was actually written by Antoine Alphone Guichenot (b. Paris, France, 31 July 1809; d. Cluny, France, 17 February 1876). He was a zoologist who collected specimens for the *Muséum national d'histoire naturelle* in Paris as an assistant to the Chair of reptiles and fishes. He never visited Cuba.

³¹ “As a naturalist I have never been a Spaniard, I have been cosmopolitan.”

three periods: (1) exploration by Europeans, (2) period of dependence from European Science, (3) independence from it. In many ways Poey played all three roles but, mostly, he was part of the classical for period (2). Despite his physical disabilities he was able to secure a great deal of specimens and observations that were new to science, just as other European explorers would do for period (1). For that he had to overcome lots of the challenges faced by earlier explorers such as the lack of local institutions and infrastructure to support him at the beginning. He also initially lacked local colleagues with whom he would share his interests although later on he did have a few students such as De La Torre with who he could work. We must remember that when he died he was still a subject of the Spanish crown living in a Spanish colony, and nationalism did not play a part in a transition to a true intellectual independence since he was still subject of whatever intellectual currents were prevalent in both the U.S. and Europe. Also, because Cuba, as a Spanish colony, had had so little tradition in integrating science into society, the national context in which he worked was almost void. We are not sure whether or not he found resistance to science as an additional obstacle. What we do know is that he was respected because of his personality and expertise on fishes but was probably seen as a respectable curiosity by the Cuban society at large. Although he was given university posts and the Spanish government did ask him to collect specimens to be sent to Madrid, Poey was most likely chosen for those roles by default given that there were no other naturalists of his prestige in Cuba at that time. So his social role was not that important except for his position as educator and founder of some institutions in civil society. It is not clear that his work received much of state financial aid or encouragement.

These contentions are supported by a comment made by Jordan after visiting him in Cuba in 1884: “Although Professor Poey is evidently held in very high respect in the university, in which he has long been dean of the faculty of science, I can not imagine that he ever received much help or sympathy in his scientific work from that quarter, or indeed from any other in Cuba. His friends and countrymen are doubtless glad to be of assistance to so amiable a gentleman as the Señor Don Felipe, but for the claims of science the people of Cuba, as a class, care very little” (Jordan 1884).

Poey did introduced and/or expanded the teaching of science at all levels as an author of textbooks, university administrator, and as a teacher himself. He founded and/or participated in all major scientific organizations of his time that were aimed at promoting the sciences. He clearly maintained channels of formal and informal national and international scientific communication and the use of the languages most employed at that time in science (French, English) were not a problem for him.

Given all of the above it is hard to argue that Poey was an “isolated genius.” On the contrary, he was as well connected and as well-known as any other scientist of his generation among his peers. Although he had a few students who were competent at what they did, none of them –and no other contemporary biologist in Cuba for that matter- came close to him when it came to knowledge and insight on both the natural history of the island or insights on biological ideas as a whole. Thus, he may have felt internally isolated from an intellectual viewpoint but externally connected through his network of international contacts.

Hagiography

Hagiography of Spanish and Latin American scientists (and Poey was both since Cuba did not gain independence from Spain until 1898, seven years after his death) predating the 20th century is quite common. For example, to describe the Venezuelan mathematician and astronomer Juan Manuel Cagigal y Odoardo³² the following rhetoric has been used: “On November 22, 1844, arrives back to Caracas. He is already a sleepwalker. And that colossus who had in the brain a lighthouse, which flashed by itself as many glares, which is always recreated

³² b. Barcelona, Venezuela, 10 August 1802; d. Yaguaraparo, Venezuela, 10 February 1856.

with the geometric poem of the stars and toured the brilliant course of the constellations, died in the darkness of dementia”³³ (Grisanti 1956:43).

Descriptions of Poey along similar lines are not much different including claims that he preceded Darwin in his evolutionary ideas and others in the discoveries of fossil humans, claims for which there are not any basis: “He had the glory to anticipate other scholars claiming the existence of fossil man before prehistory was recognized by science; and before Darwin made known his theory of the ‘Origin of the species,’ he established the doctrine of ‘continuous is the transformism’, principle on which rests the evolution in the formation of the organic species”³⁴ (Carbonell y Rivero 1928:8).

This trend regarding Poey had been noticed by others. Boss and Jacobson (1975), for example, wrote “In an effulgent fashion, the Cuban writers (Dihigo, 1915; Jaume, 1955; Mestre, 1891; Montane, 1918; De La Torre, 1942) shower reams of almost hysterical praise upon Poey. At times the reader has to struggle through many pages of dithyrambic prose before he can garner a single sober fact. Nevertheless, it must be admitted that this talented and industrious man added much to the intellectual life of his country. He contributed significantly to the knowledge of Cuba's bewilderingly rich fauna and he deserves to be better known.”

As a Scientist and Intellectual

Poey's contributions to science were important, widely published, and well known by many both in Cuba and abroad. He belonged, founded and/or presided over the most important scientific and intellectual societies of his time in both Cuba and abroad while receiving a number of international recognitions. The list of people with whom he corresponded in scientific matters, reads like the “who is who” of researchers of his time in the areas of ichthyology, ornithology, entomology and malacology. Foreign naturalists visiting Cuba not only met with him but also wrote articles about him as a scientist and as a person. His writings reveal that he was open to (and later adopted) the scientific ideas such as the Darwinian theory of evolution by means of natural selection. Despite not having a formal education in the sciences his knowledge and pedagogical abilities were recognized to the point that he ended his career as Dean of the School of Sciences at the Universidad de La Habana.

Thus, how can we best define Poey as a scientist? We could say that he was a man of intelligence and commitment, which helped him to overcome not having a formal education in the sciences and his own physical disability that prevented him from doing fieldwork. The many areas on which he worked and published are evidence of his intellectual curiosity and breadth. He had an open mind that allowed him to learn new facts and adapt his thinking to new ideas for which he earned the respect of his peers internationally and from many of his compatriots during his lifetime. In other words, he did the best anyone could have done giving the geographic, political, and social limitations of his time; therefore, there is no need for more hagiography on him. We could even argue that hagiography is the result of lack of understanding of the actual contributions of the person being biographed by substituting comparative analyses with hyperbole.

³³ The original is Spanish reads as follows “El 22 de noviembre de 1844 arriba de nuevo a Caracas. Es ya un sonámbulo. Y aquel coloso que tenía en el cerebro un faro, que despidió de sí tantos fulgores, que se recreó siempre con el poema geométrico de las estrellas rutilantes y recorrió el fulgurante derrotero de las constelaciones, murió en las tinieblas de la demencia.”

³⁴ The original Spanish reads as follows: “Tuvo la gloria de anticiparse a otros sabios afirmando la existencia del hombre fósil antes de que la prehistoria fuera reconocida por la ciencia; y antes de que Darwin diera a conocer su teoría del ‘Origen de la especies’ él estableció la doctrina de ‘lo continuo es el transformismo’, principio en que descansa la evolución en la formación de las especies orgánicas.”

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