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Professor Neil F. Safier, Brown University

NEW WORLD OBJECTS of KNOWLEDGE

A Cabinet of Curiosities

Edited by Mark Thurner and Juan Pimentel



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Cover image: *El Quadro de Historia Natural, Civil y Geográfica del Reyno del Perú, año de 1799.*

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BIRD OF PARADISE

José Ramón Marcaida

It is often said that the first (dead) specimens of the bird of paradise arrived in Europe in 1522 along with the surviving members of the Magellan–Elcano expedition, which had just completed the first circumnavigation of the world. While we know that this bird – native of New Guinea and the Moluccas archipelago – had been known to Europeans for some time before this date, in the early decades of the 16th century the bird of paradise was considered a novelty, a rarity. Moreover, travellers' accounts and manipulated specimens soon gave rise to the legend that the bird lacked feet and thus spent its lifetime aloft, in permanent flight. This feature, which challenged the long-held Aristotelian view that all birds should have feet, turned the bird of paradise into a natural marvel of the kind collected and displayed in cabinets of curiosities and elaborate headdresses.

One of the earliest and most remarkable descriptions of the bird appears in the revised and expanded version of the first part of the *General and Natural History of the Indies* of Gonzalo Fernández de Oviedo (1478–1557).¹ Oviedo's description of this most 'notable, singular and admirable bird' (*una ave*

ó páxaro extremado y mucho cosa de ver) consumes an entire chapter. Oviedo opens the chapter with a brief account of his personal encounter with the dead bird in Hispaniola, where he had the opportunity to converse with the explorers Andrés de Urdaneta and Martín de Islares. In the course of that conversation, Urdaneta presented him with a prestigious and rare gift from the East Indies: a panache of feathers (*un plumaje o penacho*) of a bird which neither Urdaneta nor Islares could name. Oviedo begins his account of this bird skin by noting his inability to describe its beauty with words. Its feathers were the finest he had ever seen. It was an object so beautiful, he writes, that it must be seen rather than described in words. 'Of all the things I have seen, this is the one that has left me with the least hope of ever making it known with my words.' To be sure, Oviedo's words conform to the rhetorical practices of his age, when the trope of the inadequacy of words, associated with the wondrous or sublime, secured the privileged, knowing position of the eyewitness and narrator.

Despite the professed insufficiency of words, Oviedo proceeds to provide an exhaustive written description of the bird in his possession. First, by focusing on features like the size of its body and head and the form of its beak, Oviedo establishes comparisons with more familiar European birds. This, too, was a common rhetorical strategy when dealing with previously unknown natural objects. On the hugely contested issue of the bird's feet, Oviedo states that

1 G. Fernández de Oviedo, *Historia general y natural de las Indias y tierra-firme del Mar Océano*, edited by J. Amador de los Ríos (Madrid: Imprenta de la Real Academia de la Historia, 1851), vol. 1.

the bird does not seem to have any, although he admits to having felt with his fingers two little stumps where the feet should have been. Unsurprisingly, most of Oviedo's description is devoted to the bird's feathers. These are discussed in terms of their position on the bird's body, their size and shape, texture and arrangement and, most importantly, their colours. Oviedo is particularly intrigued by two feathers situated at the top of the bird's tail. Each of them is like 'a thick pin' that at the end tapers 'like thread'. When touched, they are 'jagged like a saw'. These feathers would inspire speculation about the creature's comportment, including the notion that the feathers were used to hang from branches of trees.

Oviedo's description of the bird is followed by a reflection on the challenges of capturing in words and images the true qualities of such wonderful natural objects as this. Given its unique characteristics, its colour and the texture of its feathers, he concludes, 'no painter would be capable of painting it'. Near the end of the chapter, Oviedo reflects on the ornamental use of the bird of paradise and its association with majesty and power. He notes Urdaneta's account of the social and commercial value of the bird for Moluccans, among whom it was regarded as 'a rare and precious commodity'. Indeed, worn as a headdress the bird was a symbol of prestige for Moluccan elites. Oviedo suggests that the Holy Roman emperor, Charles V, would do well to wear one of these birds as a symbol of his magnificence and power. He illustrates this point by evoking a series of printed portraits of the Ottoman sultan Süleyman I that feature a bird-of-paradise headpiece. This reference attests to the richness of Oviedo's visual literacy and more importantly to the geographical range of the bird both as an object of knowledge and as a motif of power. Finally, Oviedo informs us that he gave his bird skin to a friend who then departed for Peru. 'Thus, it can be said that, after death, this bird walked, flew and sailed more than he ever did when alive.'

Though Oviedo's description of the bird of paradise was never published in his lifetime, it resonates with later Iberian natural historical accounts, primarily focused on America, which also highlight the bird's mobility and circulation. Thus, Francisco López de Gómara (c.1511–c.1566), in his *General History of the Indies* (1553), provides a brief account of this

bird, whose legs he describes as a handspan long.² Interestingly, this statement would have contradicted the legend of the footless bird of paradise and corroborated the information provided by Antonio Pigafetta (c.1491–c.1531), a surviving member of the Magellan–Elcano expedition, in his travel journal (1519–22, later published under the title *The First Voyage around the World*), where he describes the birds in their possession as having legs.³ The physician Francisco Hernández (1514–87), the leader of a seven-year-long state-sponsored scientific expedition to New Spain (1570–7), also describes the (footless) bird of paradise in his manuscript account of New Spain's natural history and medical knowledge. Hernández's description would be disseminated via later translations and editions of his texts, including treatises published in Mexico City (Francisco Ximénez, 1615), Antwerp (Juan Eusebio Nieremberg, 1635) and Rome (Accademia dei Lincei, 1648–51).⁴ Lastly, in his *Natural and Moral History of the Indies* (1590), the Jesuit scholar José de Acosta (1540–1600) also refers briefly to the bird of paradise, which he describes as being 'brought from China' and 'lacking feet'.⁵

To return to Oviedo's account, his description testifies to the bird's status as a global *perpetuum mobile* of trade, prestige and knowledge. In this sense, the arrival of the birds of paradise in Europe with the surviving members of the first expedition to circumnavigate the world is a fitting landmark for the dawn of the global age.

2 F. López de Gómara, *Historia general de las Indias* (Zaragoza: Agustín Millán, 1553).

3 A. Pigafetta, *The First Voyage around the World, 1519-1522: An Account of Magellan's Expedition*, T.J. Cachey, ed. (Toronto: University of Toronto Press, 2007).

4 F. Ximénez, *Quatro libros de la naturaleza y virtudes de las plantas y animales que estan recebidos en el uso de la medicina en la Nueva España* (Mexico City: Widow of Diego López Dávalos, 1615); J.E. Nieremberg, *Historia naturae, maxime peregrinae* (Antwerp: Plantin-Moretus Press, 1635); F. Hernández, *Rerum medicarum Novae Hispaniae thesaurus* (Rome: Vitale Mascardi, 1651).

5 J. de Acosta, *Historia natural y moral de las Indias* (Seville: Juan de León, 1590).



Figure 1. Manucodiata or bird of paradise. In J.E. Nieremberg, *Historia naturae, maxime peregrinae* (Antwerp: Plantin-Moretus Press, 1635).

FURTHER READING

- Carrillo, J. (2004) *Naturaleza e imperio: la representación del mundo natural en la 'Historia General y Natural de las Indias' de Gonzalo Fernández De Oviedo* (Madrid: Fundación Carolina/Doce Calles).
- García Arranz, J.J. (1996) 'Paradisea avis: la imagen de la naturaleza exótica al servicio de la enseñanza didáctico-religiosa en la Edad Moderna', *Norba-Arte*, vol. 15, 131–52.
- Marcaida, J.R. (2014) 'El ave del paraíso: historia natural y alegoría', in *Alegorías: imagen y discurso en la España moderna*, edited by M. Tausiet, 93–108 (Madrid: CSIC).
- Massing, J.M. (2007) 'Paradisaea apoda: the symbolism of the bird of paradise in the sixteenth century', in *Encompassing the Globe: Portugal and the World in the 16th & 17th Centuries, 3: Essays*, edited by J.A. Levenson, 28–37, 258–61 (Washington, DC: Smithsonian Institution).
- Millones Figueroa, L., and D. Ledezma (eds.) (2005) *El saber de los jesuitas, historias naturales y el Nuevo Mundo* (Madrid/Frankfurt am Main: Iberoamericana, Vervuert).
- Myers, K.A. (2007) *Fernández de Oviedo's Chronicle of America: A New History for a New World* (Austin, TX: University of Texas Press).
- Pardo-Tomás, J. (2002) *Oviedo, Monardes, Hernández: el tesoro natural de América* (Madrid: Nivola).