

OXFORD

WRITING ZOOLOGICAL NATURAL HISTORY FOR BRITISH INDIA



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The English Connection

Early European Encounters with Indian Fauna

In a captivating account, the Portuguese Nobel Laureate in Literature, José Saramago (1922–2010), traces the journey of Solomon, an Indian elephant, from the court of Dom Joao III (r. 1521–1557) in Lisbon, to his Hapsburg cousin in Vienna, the future Holy Roman Emperor, Maximilian II (r. 1564–1576). Intended as a wedding present, the wonder with which the pachyderm is received at various moments of public revelation throughout its European travel finds reimagination in terms both risible and mystical.¹ Such wonder, of course, was the property of any level of encounter with unfamiliar creatures. It does explain why interest in the procurement and keeping of animals is hardly of recent vintage, particularly of certain species for the purposes of domesticity or for their exotic quality, the latter chiefly in the context of menageries.² For instance, during the early modern period, the time when European presence in the South Asian region was first encountered in a substantively political form via the Portuguese themselves, a Great Indian rhinoceros (*Rhinoceros unicornis*) was presented by Sultan Muzaffar Shah

¹ José Saramago, *The Elephant's Journey*, translated by M. J. Costa (London: Vintage Books, 2017).

² See, for instance, Vernon N. Kisling (ed.), *Zoo and Aquarium History: Ancient Animal Collections to Zoological Gardens* (Boca Raton, FL: CRC Press, 2001), for collections in ancient Egypt, China, India, Mesopotamia, Peru, and Mexico; and R. J. Hoage and William A. Deiss (eds), *New Worlds, New Animals: From Menagerie to Zoological Park in the Nineteenth Century* (Baltimore: Johns Hopkins University Press, 1996). For accounts of Indian elephants in a larger colonial context, see Raman Sukumar, *The Story of Asia's Elephants* (Bombay/Mumbai: Marg, 2011), Thomas Trautman, *Elephants and Kings: An Environmental History* (Chicago: University of Chicago Press, 2015), Sumit Guha, *Ecologies of Empire in South Asia, 1400–1900* (Ranikhet: Permanent Black, 2021). Recently, there have been thoughtful discussions of elephants in cultural contexts in Jonathan Saha, *Colonizing Animals: Interspecies Empire in Myanmar* (Cambridge: Cambridge University Press, 2021), and Nigel Rothfels, *Elephant Trails: A History of Animals and Cultures* (Baltimore: Johns Hopkins University Press, 2022).

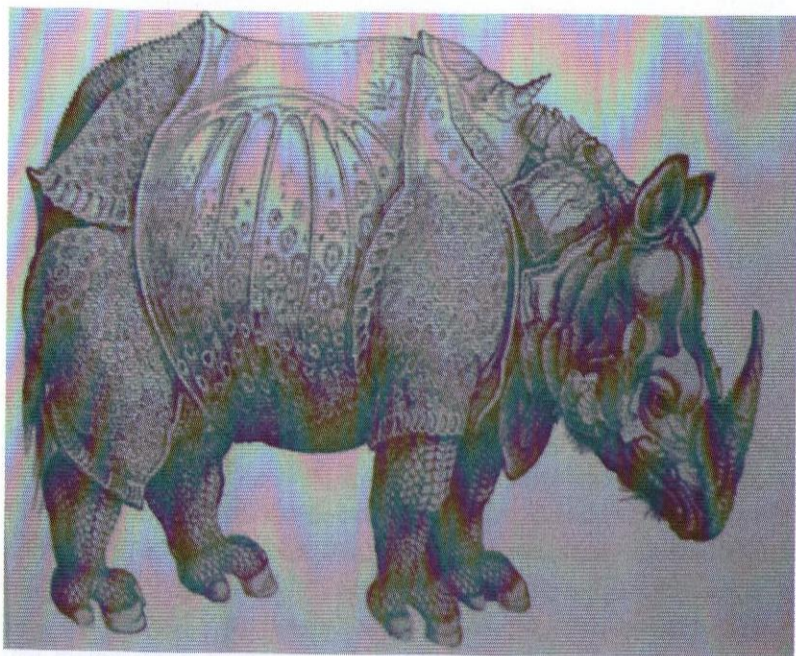


Figure 1.1 Image of Albrecht Dürer's woodcut in the Tower of Belem, Lisbon.^a

^a Photograph by the author

II (r. 1511–1526) of Gujarat in 1515 from his menagerie at Champaner, to Afonso de Albuquerque (g. 1509–1515), governor of Portuguese India at Goa, who in turn dispatched it to his king Dom Manuel I (r. 1495–1521), in Lisbon.³ The rhinoceros, complete with gilt-iron chain and green velvet collar, was sent to the Medici Pope Leo X (r. 1513–1521) via Marseilles, where it was seen by King François I (r. 1515–1547) of France, before going down, on its outward sea-voyage, with the ship that bore it, off the coast of Italy.⁴

The memory of the animal endured in public memory, however, through a woodcut by Albrecht Dürer (1471–1528), who, ironically, never laid eyes on the animal himself (see Figure 1.1). Portugal would

³ Kisling, *Zoos and Aquarium History*, 29.

⁴ Pamela H. Smith and Paula Findlen (eds), *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe* (New York: Routledge, 2001).

also be the conduit for other South and South-East Asian mammals to Rome, including Asiatic elephants (*Elephas maximus*), such as the celebrated Hanno, also a present to the same Pope, in 1514.⁵ But the transfer of exotic animals was not only directed towards Europe, as suggested by the illustration of a dodo (*Raphus cucullatus*)⁶ from Mauritius amongst others in the natural history drawings commissioned by the Mughal Emperor Jehangir (r. 1605–1627), widely considered the great naturalist of the dynasty for his sustained interest in wildlife.⁷ Visitors to Jehangir's court presented him with faunal exemplars from all over the world—zebras, loriquets, mottled polecats, pheasants, yaks, and domestic turkeys, which made their way to his menagerie. The mere circulation of animals globally, however, is not the focus of this book; rather it is the knowledge that accrued from the encounter thereof that is of interest in shaping the faunistic understanding of a region. It is worth pointing out that in all these cases, the animals were part of a gift, rather than a commercial economy truer of the plant trade.⁸

While animals were certainly also the substance of *materia medica*, their representation compared to that of their botanical counterparts was modest, although four of the sections of Garcia da Orta's (c.1500–c.1568) famous treatise of 1563, *Coloquios dos simples e drogas he cousas mediçinais da India* (*Colloquies on the Simples and Drugs of India*) related to animal products, the substance of the other fifty-four was entirely to do with plants.⁹ Later tomes of the same time such as those of Cristobal

⁵ Silvio A. Bedini, *The Pope's Elephant* (New York etc.: Penguin Books, 2000).

⁶ A. Ivanov, 'An Indian Picture of the Dodo', *Journal Für Ornithologie* 99, no. 4 (1958), 438–440, <https://doi.org/10.1007/bf01671614>.

⁷ M. A. Alvi and A. Rahman, *Jahangir: The Naturalist* (New Delhi: Indian National Science Academy, 1989). Also see Sâlim Ali, 'The Mughal Emperors of India as Naturalists and Sportsmen', *Journal of the Bombay Natural History Society (JBNHS)* 31, no. 4 (1927), 833–861, Part II *JBNHS* 32, no. 1 (August 1927), 34–63, and Part III *JBNHS* 32 no. 2 (October 1927), 264–273. Ali writes, 'It has been rightly said of Jehangir that had he been head of a Natural History Museum he would have been a better and happier man. Besides a passion for justice the outstanding features of his character were his love of nature and his powers of observation.' *JBNHS* 31, no. 4 (February 1927), 841.

⁸ Smith and Findlen, *Merchants and Marvels*, 1. Also see Londa Schiebinger and Claudia Swan (eds), *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2016).

⁹ Garcia da Orta, *Coloquios dos simples e drogas he cousas mediçinais da India e assi d'algumas frutas nella onde se tratam algumas cousas tocantes a mediçina pratica e outras boas pera saber compostos pello Dor. Garcia Dorta.*, trans. Clements Robert Markham (Impresso em Goa: Por J. de Endem, 1563). See in particular, Colloquium 3—ambergis, Colloquium 21—ivory, Colloquium 29—lac, and Colloquium 45—bezoar stones.

Acosta (c.1515–c.1592),¹⁰ and in the next century, the extraordinary 12-folio herbal *Hortus indicus malabaricus, contiens regioni malabarici apud Indos celeberrimi omnis generis plantas rariores*, commissioned by the Dutch Commander of Malabar, Hendrik Van Reede tot Drakenstein (1636–1691), which dealt exclusively with the flora of that South Indian region, as well as a similar work by Paul Hermann (1646–1695) on the plants of Ceylon, spoke volumes to the strategic importance of the botanical knowledge of Asia for Europeans.¹¹ Kapil Raj's unearthing of the story of Nicolas L'Empereur (around 1660–1742), who assiduously arranged for the translation of a herbal (a compendium of plant material for medicinal purposes) from Oriya (the language of the present day Indian state of Odisha, formerly Orissa) into French also follows the same pattern, with minimal reference to animals.¹²

Plant and animal specimens were circulating across the Indian Ocean well before the advent of the Europeans to the subcontinent, particularly through the spice trade mediated through the Arabs in the Middle Ages, and with the development of gardens and menageries in several locations. Animals were also objects of interest and knowledge in the medieval and early modern periods. The Mughal Emperor Babar (r.1526–1530), for instance, is known to have reported on the presence of the rhinoceros as far west as Peshawar (in present-day Pakistan).¹³ His grandson Akbar

¹⁰ Cristóbal Acosta and Martin de Victoria, *Tractado Delas Drogas, y Medicinas De Las Indias Orientales, Con Sus Plantas Debuxadas Al Buiro* (En Burgos: por Martin de Victoria, 1578).

¹¹ Garcia da Orta's work, for instance, was translated into Latin almost immediately by Charles de l'Escluse (Carolus Clusius), founder of the botanical garden in Leiden, a fact of significance in both Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1860* (Cambridge: Cambridge University Press, 2003), and Raj, *Relocating Modern Science*.

¹² Raj, *Relocating Modern Science*, 27–59.

¹³ William T. Blanford, *Mammalia* (London: Taylor and Francis, 1888–1891), p. 473. 'At the present day, the great Indian rhinoceros is almost restricted to the Assam plain, and it is very rare, if it exists, west of the Teesta river . . . Formerly this animal was extensively distributed in the Indian Peninsula. It was common in the Punjab as far west as Peshawar in the time of the Emperor Baber (sic) (1505–1530).' A very interesting debate subsequently occurred on the subject in the pages of the *Journal of the Bombay Natural History Society* VII (1892–93), 248–250, 533–536. An anonymous review reported a statement by the President of the Society that Babar had killed hippopotamuses in Bannu and humorously continued that 'the author of the Book of Job expressly mentions Behemoth as indifferent to the floods of Jordan, and if we are to open our mouths for this sort of scientific diet, a Hippopotamus might nearly as well have got from the Jordan to the Kuram as a Rhinoceros to Peshawar'. The reviewer proceeded to suggest that the given extract, from Leyden and Erskine's translation of the Emperor's Turki Memoirs was generally based on poor evidence, and that the animal in question was more likely to have been a swamp deer (*Recervus duvaucelii*) or Gonde (or Gond) in Hindustani, than Genda, the Hindustani name for the rhinoceros. In the Correspondence Section of the same edition,

(r.1556–1605) used cheetahs to hunt, and two chapters in *Ain-i-Akbari* ('Chronicles of Akbar's Rule') are devoted to the animals, describing their trapping, manner of capturing prey, classification, food, and keepers' wages.¹⁴ The writings of Akbar's naturalist son Jehangir, who we have encountered earlier, included detailed descriptions of 33 species of animals, 11 species of plants, and additional if incidental references to 36 more animal species and 57 more of plants, complete with distinctive characters, anatomical notes, habits, local names, and measurements.¹⁵

Natural history has been one of the most exciting areas of the history of science in the last 30 years because of a number of studies emerging on the circulation of such knowledge. Part of the colonial story has already been related by Harold Cook in relation to Holland and its reach to South East Asia, especially to places like Batavia.¹⁶ By coincidence, the study of the natural history of animals in Britain came into its own at roughly the same period, as David Allen, in a well-known study of British natural history, reveals:

There comes a point in the history of every pursuit at which its following becomes sufficient to entitle it to be termed a social activity . . . For natural history in Britain, this point was reached some time in the course of the seventeenth century. For long before then . . . naturalists had existed; but they had been few and scattered and had necessarily worked in isolation . . . After 1600 the first decisive steps began to be taken towards a more formalised coming together.¹⁷

Blanford returned that the reviewer clearly did not have Babar's memoirs in front of him since there were at least two places where the animal was described in detail and that it was 'a matter of regret that in this case and in some others, my critic, who has not given his name, but who evidently has a considerable amount of zoological knowledge, should have written more emphatically than was necessary', a fact that the reviewer admitted in turn for want of access to the memoirs in question.

¹⁴ Abul Fazl Allami, *Ain i Akbari* (New Delhi: New Taj Office, 1989). Also see Divyabhanusinh, *The End of a Trail: The Cheetah in India* (New Delhi: Oxford University Press, 2006).

¹⁵ Alvi and Rahman, *Jahangir the Naturalist*.

¹⁶ Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, CT: Yale University Press, 2008).

¹⁷ David E. Allen, *The Naturalist in Britain* (London: Allen Lane, 1976), 5. Regarding lineaments of the argument for the European Continent more generally, see Alix Cooper, *Inventing the Indigenous Local Knowledge and Natural History in Early Modern Europe* (Cambridge: Cambridge University Press, 2009).

If the Royal Society (officially constituted in 1660) owed its beginnings in London to a meeting of minds at Gresham College 14 years earlier, natural history found organizational expression first with the Temple Coffee House Botanic Club (1689) in London, probably the first of its kind anywhere in the world,¹⁸ and soon after (although the date of commencement remains unknown), the earliest known specialist body in zoological natural history, the Society of Aurelians, which studied butterflies and other insects.¹⁹ The Linnean Society, the oldest body in the country exclusively devoted to natural history and still extant, came into being formally in 1788 at the house of its inspiration, the Scotsman James Edward Smith (1759–1828).²⁰ All these efforts were the result of a tradition of individual activity, independent of state patronage.

The French tradition, by contrast, depended upon administrative centralization.²¹ Through the efforts of the physician to Louis XIII (r. 1610–1643), Guy de la Brosse (around 1586–1641), a garden for medicinal herbs was established, which was opened to the public in 1640 as the Jardin Royal des Plantes. The Jardin would become an important centre for science under the supervision (intendance) of Georges Louis Leclerc, Comte de Buffon (1707–1788), well before similar efforts were undertaken by Sir Joseph Banks (1743–1820) for Kew Gardens in England.²²

¹⁸ Ibid., 10.

¹⁹ Ibid., 14. A date, however, attends the demise of the group to about a year — March 1747–1748, where a blaze destroyed the meeting place in Cornhill, with the members barely escaping with their lives even as the entire collection of insects, as well as the library, were engulfed in flames and lost.

²⁰ Ibid., 46.

²¹ For a comprehensive account of the scientific endeavour in question, see Maurice P. Crosland (ed.), *The Emergence of Science in Western Europe* (Cambridge: Science History Publications, 1996), and Maurice P. Crosland, *Studies in the Culture of Science in France and Britain since the Enlightenment* (Coventry: Variorum, 1995), while on the subject of French administrative supervision, see Maurice P. Crosland, *Science under Control: The French Academy of Sciences, 1795–1914* (Cambridge: Cambridge University Press, 2002).

²² Harro Strehlow, 'Zoological Gardens of Western Europe', in *Zoo and Aquarium History: Ancient Animal Collections to Zoological Gardens*, ed. Vernon N. Kisling (Boca Raton, FL: CRC Press, 2001), 89. There was around 1790, a private Société d'Histoire Naturelle around 1790 that was largely anti-Buffonian. Emma C. Spary, *Utopia's Garden. French Natural History from Old Regime to Revolution* (Chicago/London: University of Chicago Press, 2000), 175. In this regard, also see Pascal Duris, *Linné Et La France: (1780–1850)* (Geneva: Droz, 1993), 69–93. For a definitive account of the development of Kew, see Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000), as well as Donal P. McCracken, *Gardens of Empire: Botanical Institutions of the Victorian British Empire* (London: Leicester University Press, 1998).

From the perspective of animals, it took a royal edict to establish a menagerie by Louis XIV (r. 1643–1715) at the behest of members of his Académie des Sciences. The establishment of the Muséum national d'Histoire naturelle in the wake of the French Revolution saw the removal of the menagerie to the new Jardin des Plantes on the Left Bank of the Seine in Paris by Bernadin de St. Pierre (1737–1814). Despite radical changes in the political structure in the wake of the French Revolution (1789–1795), the autonomy of the Muséum as a centralizing institution remained largely immune to any external oversight. This was on account of strategic reformulation in the first place to address Revolutionary ideals by the directors of the Muséum. It was at their insistence that a number of naturalists would be sent worldwide to scour for objects of natural history interest in order to return them to Paris.

Faunal Natural History in India in the Wake of the Treaty of Paris

The Treaty of Paris that ended the Seven Years' War (1756–1763) in Europe had very different outcomes for Britain and France in India. Chandernagore in Bengal had largely been razed by the British at the beginning of hostilities and by 1761 the fortifications of Pondicherry had been levelled.²³ While all possessions in the country lost by the French were returned as a consequence of the treaty, their political power in the subcontinent had been broken, and one of the conditions of the return was demilitarization.²⁴ With the French out of the way and the *diwani* (right to collect revenue) of Bengal confirmed in the wake of the victory over the Nawab of Bengal, Siraj-ud-Daulah (1733–1757) at Plassey in 1757, the English East India Company (henceforth the Company or the EIC) moved swiftly to consolidate imperial power in their trading metropolis of Calcutta, soon to become one of the most important cities of the British Empire. A change in governance in Calcutta resulted in the

²³ Claude Markovits (ed.), *Histoire De L'Inde Moderne, 1480–1950* (Paris: Fayard, 1994), Chapitres XII–XIV.

²⁴ Ibid.

assumption by the British of the trappings of the Mughal state, which would fashion the practice of natural history in the subcontinent. The historian Robert Travers argues that the language of constitutionalism was transplanted from Britain but clad in a call to an ancient Mughal constitution, ancient in this case simply meaning previous.²⁵ The anthropologist Bernard S. Cohn draws attention to the considerable efforts that the British paid to the creation of colonial traditions, examining in the process the manner in which such power depended upon the appropriation of local tradition in order to invest the Company with a sense of legitimizing authority.²⁶

What were the implications of such a change in governance for natural history?

The answer was relatively straightforward for plants with the genesis of the Calcutta Botanical Gardens in 1787, founded in the wake of one of the worst famines that had ever ravaged Bengal (1769–1773). Dessicationist ideas, popularized by the seminal work of the Frenchman Pierre Poivre (1719–1786) and his compatriots and acolytes, Philibert Commerson (1727–1773) and the earlier mentioned Bernadin de St. Pierre, author of the celebrated tragic novel *Paul et Virginie*, all in Île de France/Île Maurice (Mauritius), had swiftly been adopted by the British in India, the pivotal figure driving the effort was Captain Robert Kyd (1746–1793).²⁷ Kyd was interested in transferring spice trees from the Himalaya to Calcutta, and subsequently considered introducing drought resistant crops to regions that were subject to unpredictable precipitation.²⁸ The Company was not immediately warm to Kyd's initiative, the personal enthusiasm of the interim Governor-General of Bengal, Sir John Macpherson

²⁵ Robert Travers, *Ideology and Empire in Eighteenth-Century India: The British in Bengal* (Cambridge: Cambridge University Press, 2007), 8.

²⁶ Bernard S. Cohn, 'Representing Authority in Victorian India', in Eric Hobsbawm and Terence Ranger (eds), *The Invention of Tradition* (Cambridge: Cambridge University Press, 1983), 165–209.

²⁷ See Grove, 'Protecting the Climate of Paradise: Pierre Poivre and the Conservation of Mauritius under the ancien regime' in *Green Imperialism*, 168–263.

²⁸ Letter from Robert Kyd to the Board of the EIC, 15 April 1786, quoted in Oriental and India Office Records (henceforth OIOR), Home, Misc. 799 (Proceedings of the Supreme Council 'relative to the establishment of a botanical garden on the site of the old fort at Machwa Tannah at Calcutta, 21 August – 6 March 1788, proposed by Colonel Robert Kyd', 1–201), and referenced in Grove, *Green Imperialism*, 333n71.

(1745–1821), apart, and it was only when the commercial possibilities of the gardens were highlighted in preference to the famine-based angle that the Board came around.²⁹ There was great promise in such commercial prospecting and many centres emerged in the 18th century for gardens of acclimatization, including Paris and Uppsala. The colonies were also a significant part of the picture with successful gardens developed in St. Vincent in the Caribbean, largely at the behest of Sir Joseph Banks (1743–1820), President of the Royal Society, and major moving spirit behind the founding of the Botanic Gardens at Kew, as well as in the Cape Colony of South Africa, and elsewhere in the British Empire. The result was a network of colonial gardens that would be established, each with nodal links to Kew, subsequent to its transformation from royal garden to public institution, and also with each other. The important part about crop experimentation was that it could be attempted locally, rather than have the plants despatched for the purpose to England.³⁰ In India, botanical gardens would be developed, apart from Calcutta, in other metropolitan centres such as Bombay and Madras, and less populous sites such as Saharanpur as well.

But animals were different. They did not hold out an anticipated panacea for famine, such that they would find pride of place in early husbanding grounds concomitant with the establishment of the Calcutta Botanic Gardens.³¹ D. M. Bose, S. N. Sen, and B. V. Subbarayappa, in their history of science in India, state that unlike botany, which had been signally served by William Roxburgh (1751–1815) and Nathaniel Wallich (1786–1864), both Superintendents of the Calcutta Botanic Garden in the first quarter of the 19th century, zoology did not have anything ‘worth the name’. They adopted this phrase from the *Centenary Review of the Asiatic Society of Bengal* that had been employed owing to an apparent lack of enthusiasm for studies on animals by Sir William Jones

²⁹ Grove, *Green Imperialism*, 335. Also see Rajesh Kochhar, ‘Natural History in India during the 18th and 19th Centuries’, *Journal of Biosciences* 38, no. 2 (April 2013), 1–23, <https://doi.org/10.1007/s12038-013-9316-9>, and Martyn Rix, *Indian Botanical Art, An Illustrated History* (New Delhi: Roli Books, 2021), 22–24.

³⁰ Grove, *Green Imperialism*, 336.

³¹ The 109 hectare Calcutta Botanic Garden is now known as the Acharya Jagadish Chandra Bose Indian Botanic Garden and is operated by the Botanical Survey of India. See <https://tools.bgci.org/garden.php?id=53>

(1746–1794), the founder of the Asiatic Society.³² They quoted Jones himself on the subject of his paucity of interest during the course of his tenth anniversary discourse to the Society:

Could the figure, instincts, and qualities be ascertained either on the plan of Buffon, or on that of Linnaeus without giving pain to the object of our examination? Few studies would afford us more solid instruction or more exquisite delight; but I never could learn by what right, nor conceive with what feeling, a naturalist can occasion the misery of an innocent bird, and leave its young, perhaps to perish in a cold nest, because it has gay plumage, and has never been delineated, or deprive even a butterfly of its natural enjoyment, because it has the misfortune to be rare or beautiful.³³

Jones's seeming disapprobation was not necessarily borne out in print, given his own sedulous description of the Pangolin or Scaly Anteater (*Manis crassicaudata*),³⁴ the illustration labelled with the Sanskrit name Vajracita³⁵ in the first volume of *Asiatick Researches* itself,³⁶ and comparing it to the original description by the Comte de Buffon (1707–1778).

³² Debendra M. Bose, Sailendra N. Sen, and Bidare V. Subbarayappa (eds), *A Concise History of Science in India* (New Delhi: Indian National Science Academy), 530–531. Also, see Rajendralala Mitra, 'Part III-Natural Science', in *Centenary Review of the Asiatic Society of Bengal: From 1784 to 1883* (Calcutta: Asiatic Society of Bengal, 1885), 57. The review unequivocally asserts that Sir William Jones was averse to zoological study. It also states in regard to the quotation referenced that the 'noble and humane sentiments' were '[s]o feelingly and eloquently declared and by a man of Sir William Jones's position and influence, they no doubt tended seriously to discourage zoological research. As a consequence, we had none worth the name until the year 1828.'

³³ Sir William Jones, '10th Anniversary Discourse', *Asiatick Researches* 4 (1799), xi–xxxi. See especially xxiv–xxvi.

³⁴ It is ironic that Sir William Jones's choice of animal to describe, the pangolin, has been implicated, if not entirely proven, as being a host for the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) that is at the heart of the COVID-19 pandemic, which consumed public attention and movement (or relative lack of it) particularly between 2020 and 2022.

³⁵ While no date is given for the term in Jones's essay, the explanation for the term is given follows by the author: '... the name alludes, I believe, to the hardness of the scales; for Vajracita means in Sanscrit the Diamond, or Thunderbolt, reptile, and Vajra is a common figure in the Indian poetry for any thing excessively hard ...'

³⁶ William Jones, 'On The Pangolin of Bahar—sent by Matthew Leslie, Esq', *Asiatick Researches* I (1788), 376–378. Note the utilitarian angle to the project: 'There are in our Indian provinces many animals, and many hundreds of medicinal plants ... To procure perfect descriptions of them from actual examination, with accounts of their several uses in medicine, diet or manufactures, appears to be one of the most objects of our institution.'

However, the point of differential treatment to animals compared to plants appears to hold some weight, on account of economic purchase (or lack thereof) to the Company.³⁷

Yet animals endured in the public imagination. They were objects of veneration, of domesticity, of the hunt.³⁸ They were legion in the realm of symbols (though this was true for plants as well), finding places on royal standards and even in warfare, including the famed representation of the English Lion conquering the Tiger of Tipu Sultan (1750–1799), the ruler of Mysore, after the defeat and death of the latter at the Battle of Seringapatam (see Figure 1.2).³⁹

The emblem was telling—after all, a favourite keepsake (see Figure 1.3) of Tipu (popularly described as the Tiger of Mysore, with the motif of the animal visible in many of his accoutrements) (see Figure 1.4), was a mechanical organ in the shape of a tiger mauling an English toy soldier, and it seemed natural that the spoils of the victor should include the object, duly despatched to the India Museum of the East India House on Leadenhall Street, London, and upon that institution's demise in 1879, to the Victoria and Albert Museum.

The anthropologist Annu Jalais throws revealing light upon the subject:

It is certainly true that the tiger stood as the symbol of Indian monarchs, and this reference is implicit in Tipu Sultan's famous carved instrument representing a tiger pouncing on an English soldier. In a similar, though inverted symbolism, the curbing of the revolt of 1857 is represented in a painting by Edward Armitage called Retribution where Britannia is depicted, not unlike the goddess Durga, slaying a tiger. That the British

³⁷ See Deepak Kumar, *Science and the Raj: 1857–1905* (Delhi: Oxford University Press, 2000), 69 and Marika Vicziany, 'Imperialism, Botany and Statistics in Early Nineteenth Century India: The Surveys of Francis Buchanan (1762–1829)', *Modern Asian Studies* 20, no. 4 (1986), 637n59, <https://doi.org/10.1017/s0026749x00013676>.

³⁸ See Wendy Doniger, *On Hinduism* (New Delhi: Aleph Book Company, 2013), particularly the section 'Horses and Other Animals', 409–506.

³⁹ See Mildred Archer, *Tippoo's Tiger*. Museum Monograph No: 10 (London: Victoria and Albert Museum/H.M. Stationery Office, 1959) and Anand S. Pandian, 'Predatory Care: The Imperial Hunt in Mughal and British India', *Journal of Historical Sociology* 14, no. 1 (2001), 79–107, <https://doi.org/10.1111/1467-6443.00135>.



Figure 1.2 The Seringapatam Medal. Image courtesy of Medals of England.com^a

^a Medals of England, accessed 20 September 2021, <https://www.medalsofengland.com/medals.php?id=140&medalid=1409>.

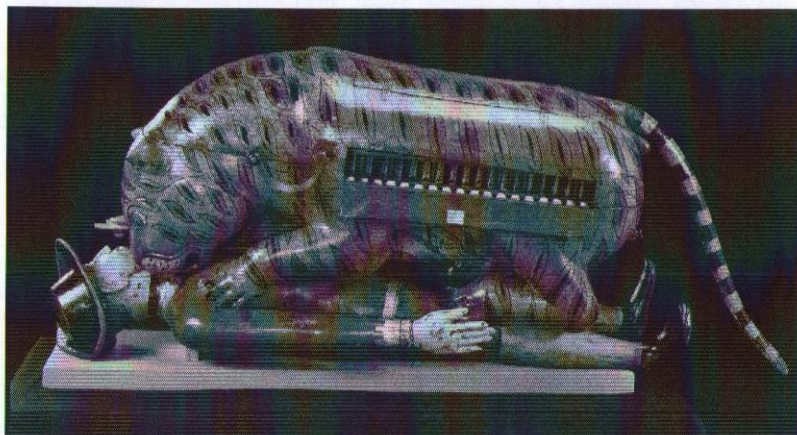


Figure 1.3 Tipu's Tiger. © Victoria and Albert Museum, London.^a

^a 'Tippoo's Tiger', © Victoria and Albert Museum, <https://www.vam.ac.uk/articles/tipus-tiger>.

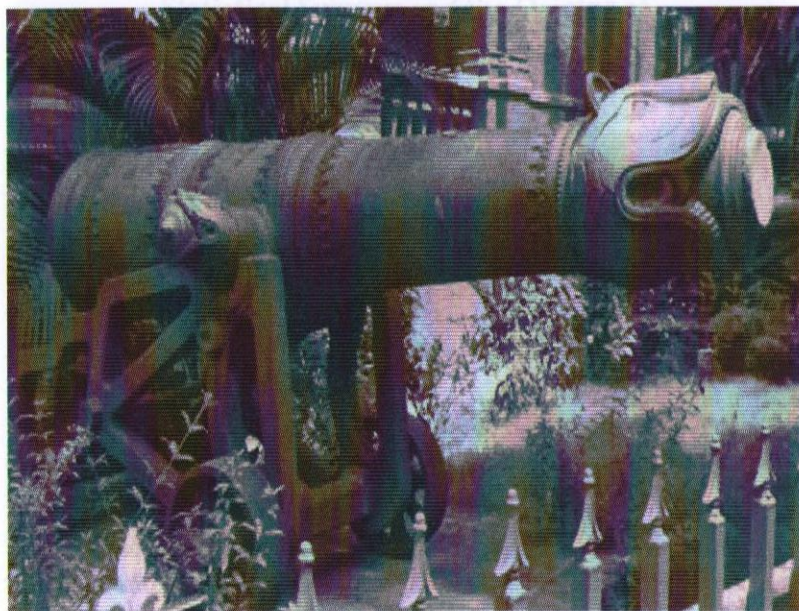


Figure 1.4 Cannon from the battle of Seringapatam, with Tipu's trademark emblem of the tiger at its mouth, Museum Theatre, Madras/Chennai.^a

^a Photograph by the author

associated the metaphor of the tiger, a 'worthy' enemy, with the control of the Pathans has been noted by Bayley (1990). Kipling's Jungle book character of Sher Khan is an animal representation of the Pathan. The tiger's 'royalness' was thus a symbol the British were keen to highlight, as it gave them the pleasure of measuring themselves against an 'equal' who stood his ground by virtue of his strength; therefore, killing a tiger (or any big cat, for that matter) added extra prestige to the sport of hunting because of the tiger's potency in symbolising the power of Indian monarchs.⁴⁰

⁴⁰ Annu Jalais, *Forest of Tigers: People, Politics and Environment in the Sunderbans* (New Delhi/London/New York: Routledge, 2010), p. 191.

The symbols were all very well (see Figure 1.4), but there was a difference in the treatment of wild predators—on the one hand some were extolled for their fierce bravery and formed the basis for the exotic, transferred both to page and illustration;⁴¹ on the other, some were considered vermin and needed to be controlled.⁴² Then both hands played at once where the exotic became the object of the grand hunt. In this regard the British were again appropriating the accoutrements of the Mughals, if in the context of their own traditions.⁴³

However, the efforts did not stop there. Some went beyond hunting, keeping and illustrating wild animals, in expressing themselves in two spaces, albeit connected, of specialization in early British India which informed natural history. The first domain was administrative through statistical surveys and a gubernatorial natural history project in which the animals of the region were systematized. The other domain was educational through the Asiatic Society of Bengal, whose publications contributed considerably to elucidating the habits and taxonomy of the subcontinental fauna and flora.

⁴¹ Pandian, 'Predatory Care', 79–107.

⁴² Various Public Works and Revenue Department Reports from Bombay and Madras between 1801 and 1835. One, of particular interest, is a recommendation by the Collector of the Northern Concan who suggests that since tigers are more dangerous than cheetahs or hyaenas in terms of depredation and indeed despatch, it would make sense to raise the amount on the head of one from twenty to forty rupees, as opposed to leaving that on the head of a cheetah at twenty and on a scavenging hyaena at eight rupees. General Department, Vol. No. 45/49, 173. Maharashtra State Archives. 12 October 1821. From the Collector in the Northern Concan proposing another measure for the destruction of the wild Beasts and suggesting that similar measures should be proposed to the neighbouring Collectors. Also see Mahesh Rangarajan, 'Venomous Snakes and Dangerous Beasts' in Mahesh Rangarajan, *India's Wildlife History: An Introduction* (Delhi: Permanent Black, 2001), 22–34.

⁴³ John M. MacKenzie, *The Empire of Nature* (Manchester: Manchester University Press, 1997); David Cannadine, *Ornamentalism: How the British Saw Their Empire* (New York: Oxford University Press, 2002). Also see Joseph Sramek, 'Face Him like a Briton: Tiger Hunting, Imperialism, and British Masculinity in Colonial India, 1800–1875', *Victorian Studies* 48, no. 4 (2006), 659–680, <https://doi.org/10.2979/vic.2006.48.4.659>. Sramek notes that in the period from 1800–1870, the improvement in technology relating to guns, and the increase in pageantry associated with the hunt (as Mackenzie puts it, 'British rule moved into the era of imperial bombast') coupled with 'the growing intrusiveness of the colonial state demonstrated by the Forest Act' (of 1865), changed the face of hunting in the subcontinent, not least in reducing the space of British-Indian interactions that had been far greater in earlier decades.

(1862–73), the superior appearance of all of which had only served to enhance the reputation of the publishing house for the production of works on natural history.³¹

The association with Günther's book was a sign of things to come so far as South Asian zoology was concerned. Taylor & Francis would proceed to become the one constant factor in the publication of the 81 ½ volume series *The Fauna of British India* across 61 years, before the series in that incarnation came to a close in the mid 20th century, almost concomitant with the independence of India and Pakistan.

Thomas Jerdon, *The Birds of India* and *The Mammals of India*

If the BM(NH) could be considered, in a Latourian sense, a 'centre of calculation',³² there is no doubt that *The Reptiles of British India*, the provenance of its publication notwithstanding, was a Euro-metropolitan project, rooted in London, with the German-born author an acknowledged expert on the cold-blooded vertebrates (fish, amphibians, reptiles) with authoritative command of comparative anatomy on these groups but dependent upon the collections of others to write tomes on regions of which he had no first-hand knowledge.³³

By contrast, *The Birds of India* (1862–1864) and *The Mammals of India* (1867) appeared at the pen of a long-standing resident in India, and one of the chief examples of the translocate as I have originally defined the term, Surgeon-Major Thomas Caverhill Jerdon (1811–1872), based in the Madras Presidency.³⁴ Born in County Durham, he studied

³¹ Ibid., 140.

³² For an elaboration of the concept, see Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, MA: Harvard University Press, 1987). There has been an earlier allusion to the same framework in this book with a brief explanation; please see footnote 219.

³³ Günther was hardly exceptional in this regard. We have already seen that Pennant's *Indian Zoology* (1791) was written at a distance, as was Donovan's *Epitome of Indian Insects* (1800). Cuvier and his acolytes in Paris depended upon the collections of *voyageur-naturalistes* abroad, and while John Gould did undertake his own field excursions, notably to Australia, his and N. A. Vigors' work on Himalayan birds (1831–32) drew from Thomas Hardwicke's collection, as did J. E. Gray's *Illustrations of Indian Zoology* (1830–1835). These are but a few examples of which there are legions.

³⁴ For biographical information on Jerdon, see C. Brandon-Jones, 'Thomas Caverhill Jerdon', *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004–11);

medicine at Edinburgh University from which he graduated in 1830. He was appointed to the EIC as an assistant surgeon in 1835 and arrived the following year in Madras, aged 24. He would spend all but two years of the rest of his life in India. Having been encouraged early in the pursuit of natural history by his father, he devoted himself to the study of birds in the main, mammals, reptiles, fish and ants throughout his career, beginning with an account of the birds of the Eastern Ghats, and completing an illustrious writing career on animals with *The Mammals of India*, which appeared in London in 1874 sadly posthumously (although there had been an earlier if error-ridden publication in Roorkee in 1866, appearing publicly the following year with an associated date of 1867³⁵). Accounts of his early work in India, including his *Illustrations of Indian Ornithology* (1844) have already been provided in Chapter 4. It was however, only well after the Indian Rebellion of 1857–1858, at which point he was named Surgeon-Major, that his most significant contributions would be made.

A series of documents between 1861 and 1864 at the National Archives of India, Delhi, attests to the placement on special duty of Jerdon 'in order to complete his work on the natural history of the vertebrated animals of India'.³⁶ Jerdon's handwritten application to the Viceroy and Governor-General of India at the time, Viscount Charles John Canning (1812–1862), to be placed on such duty was predicated on the facts that he had been engaged for some time on the natural history of the 'vertebrated animals of India', that he wished to make the work available to naturalists and students in the country, and that residence for about 6 months in Bengal in order to avail of the resources of the Asiatic Society's museum would facilitate that effort. Furthermore, he asked that a scientific tour through

Obituary Notice, 'Thomas Caverhill Jerdon', *The Ibis* 14, no.3 (1872), 342–343, and especially, Walter Elliot, 'Memoir of Dr. T. C. Jerdon', *History of the Berwickshire Naturalist's Club* 7, (1873), 143–151. Note that in some references, Caverhill is written as Claverhill, but the former shall be employed in this book for purposes of consistency.

³⁵ Thomas Caverhill Jerdon, *The Mammals of India* (Roorkee: Thomasan College Press for the author, 1867).

³⁶ See NAI/Home/Pub. 6th November 1861, 4–7 (Series A), 9 January 1862, 35–37 (Series B), 6 March 1862, 5–6 (Series A), 3 June 1863, 1–2 (Series A), 5 January 1864, 21–27 (Series B), 16 March 1864, 46–48 (Series B). Unfortunately, only the documents relating to 6 November 1861 and 16 March 1864, were obtained for personal inspection. All the others were either brittle, lost or had not been transferred from the Governmental Office, a fact generally true for documents in Series B.

parts of the country be enabled to learn more about the geographical distribution of many of the Indian animals, particularly the reptiles and fishes, for which he would only ask, in addition to the pay he would receive, the 'usual' travelling allowance. In support of his application, he furnished a list of his publications on natural history as well as reference to support from qualified colleagues both in India and Europe.³⁷ The kernel of his request was presented in an undated printed prospectus, provided below in full:

PROSPECTUS

It is proposed to publish a work on the NATURAL HISTORY of the VERTEBRATED ANIMALS of INDIA. It will contain characters of all the *classes, orders, families, and genera*, and descriptions of all the *species* of MAMMALS, BIRDS, REPTILES, and FISHES found in INDIA.

The geographic limits of the animals described in this work will be:—On the North, the watershed of the Himalayas; thence on the East from Teesta river to its junction with the Brahmapootra, and down that river to the Bay of Bengal; on the West, from the Indus, where it breaks through the Himalayas, to Kurrachee; and on the South, Cape Comorin.

The object of this work being to enable naturalists and travellers to identify such objects of natural history as they may meet with, the descriptions, though ample for discrimination, will not in general be too minute. An account of the habits and manners of the different animals described will be given as far as is known, and on this head the author's own experience and residence in various parts of the country, from Darjeeling to Trichinopoly, have enabled him to give much new information, and more especially on their geographic distribution.

In the preliminary remarks on the various classes, orders and families, a few anatomical observations are given, and under this head reference to groups not Indian is also given, and many of the more remarkable genera are noticed, thus making it a sort of Hand-book of Zoology, specially adapted for India.

³⁷ NAI/Home/Pub. 6 November 1861. Nos. 4–7 and R. N. (original copy of Bro. No. 5), Pieces 1–4. Application from Surgeon-Major T. C. Jerdon, Madras Medical Service, to be placed on special duty for six months to enable him to complete the Natural History of the Vertebrated Animals of India, in Calcutta (Handwritten).

The classes will be published separately.

The BIRDS in two volumes 8vo.

The MAMMALS in one volume 8vo.

THE REPTILES in one volume 8vo.

The FISHES in two volumes 8vo.

The greater part of the work is written and the Birds and Mammals are almost ready for the Press.

T. C. Jerdon,
Surgeon Major,
Madras Establishment.

Bengal Military Orphan Press.

Jerdon also provided a specimen description, on the Shaheen Falcon (*Falconus peregrinator*; Sundevall) as an example.³⁸

The interesting element of Jerdon's letter is that he proposed to take up the Vertebrata as a whole. At the time, Günther's work on the Indian reptiles had not yet been pursued at the length it eventually would for the appearance of his book in 1864, although Jerdon's subsequent perusal of that effort would have an impact on his own foci and efforts subsequently.

The Viceroy's response to Jerdon's application was encouraging. After stating that he had heard a great deal about the naturalist's skill, knowledge and industry of which he had not been as aware before, he declared that it would be a pity if such a valuable work could not be completed, since it would supply a deficiency in Indian science. As such, the terms of employment sought were readily granted, to which a proposal was added to purchase 25 copies of the work for the Government of India, with future consideration to be given as to whether it would be recommended to Government school and colleges.³⁹ Jerdon's somewhat delayed reply in turn, four months later, expressed his gratitude for the Viceroy's beneficence, but also sought an extension of his six-month leave to that of a year, citing delays in the printing process. He also asked if perhaps a requisition of more than 25 copies might be permitted on the part of the

³⁸ Ibid.

³⁹ Ibid., Piece 23 [No. 5]. Minute by His Excellency the Governor-General, dated Gyra, 24 October 1861.

Government, as well as appealing to the Viceroy to permit him to undertake the scientific journeys to determine the geographic extents of various classes of animals.⁴⁰ The Private Secretary, upon advisement from the Viceroy, indicated the latter's pleasure in extending the leave sought, as well as any trips the author deemed necessary out of the region, so long as such did not impede the work at hand. In that context, the Viceroy stated that he could not sanction any further work until the conclusion of the one under treatment. The issue of further copies received neutral notice with the simple request that the author state what the size of the work would be and how much he would charge for it.⁴¹ Jerdon wrote back with alacrity four days later, quite in contrast to the time that had elapsed for his previous response, to say that the work on which he was then engaged, *The Birds of India*, would extend to two volumes, priced at ten and a half rupees a volume for a total of twenty one rupees.⁴² The Governmental reply was prompt: 50 copies at the behest of the Viceroy.⁴³

The correspondence between time of response and issues monetary was not incidental. A written eulogy offered by his long-standing friend and associate, Walter Elliot, to Jerdon subsequent to the latter's demise in 1872 has suggested that he was, to put it kindly, impecunious.

Like many other men of genius, he was deficient in habits of order and method, and was especially careless in his private affairs. His whole thoughts were concentrated on his favourite pursuits, to the neglect of the commonplace but necessary requirements of domestic and pecuniary claims.* The consequence was that, although always in receipt of good allowances, he was constantly harassed by the demands of creditors, and at his death, his estate was found to be insolvent.⁴⁴

⁴⁰ NAI/Home/Pub. 7 March, No. 5 (Piece 1). Printed letter from T. C. Jerdon, Esquire, Surgeon Major Madras Army, to the Private Secretary to His Excellency the Viceroy and Governor-General of India, dated 28 February 1862.

⁴¹ Ibid., No. 6 (Piece 3). Letter from A. M. Monteath, Esq. Under Secretary to the Government of India, to T. C. Jerdon, Esq., Surgeon Major Madras Establishment, Hoomayoon Place. (No: 1231), dated 7 March 1862.

⁴² NAI/Home/Pub. 1862. 22nd March Nos. 55-56 (Pieces 1-2). Letter from Surgeon Major T. C. Jerdon to A. M. Monteath, Gyra, Undersecretary to the Government of India, dated 11 March 1862.

⁴³ Ibid. (Piece 7). Letter from the Home Dept., Fort William to T. C. Jerdon, Surgeon Major, Madras Establishment, dated 22 March 1862.

⁴⁴ Elliot, 'Memoir on T. C. Jerdon', 151.

An asterisked footnote to Elliot's remark on the subject was just as illuminating.

*Many characteristic anecdotes, illustrative of his improvidence, are current among his friends, such as his cleverly talking over an English bailiff sent from Madras to arrest him, and sending him back *re infecta*, but the bearer of a fine live specimen of a rare monkey (*Presbytis johnii*⁴⁵)! On another occasion when summoned professionally by a French lady at Mahé, he met the French governor, also a keen naturalist, at the entrance to the town, who carried him off to see some novelties, which so absorbed him that he returned home late at night, never having seen his patient and wholly oblivious of the purpose for which he had come!⁴⁶

The remarks above, no matter how humorously couched, were not stray. Both Jerdon's financial shortcomings and his lackadaisical approach to his principal vocation, medicine, would have significant implications for his taxonomic project in the mid 1860's. A series of letters at the National Archives of India show that Jerdon was in debt to a native creditor in Madras named Gopalsawmy Naidoo and that the latter had taken active steps to recover his losses in 1864 (after repeated efforts of a less strenuous nature in 1862 and 1863).⁴⁷ Apparently, Jerdon had been resisting attempts to return the money immediately by claiming that he had not received any pay from January to June of that year, and once he received it, he would make good on the loan.

The return of the money was also contingent on two other factors—the sale of land Jerdon owned in the region of Cachar (now in the North Eastern Indian state of Assam) and the appointment to the position of Deputy Inspector of Hospitals in the Madras Presidency of a subordinate, Dr Edward Green Balfour (1813–1889) to Jerdon, to whom the opportunity by rights should have gone by virtue of the latter's seniority. Jerdon made the claim to a greater allowance on the grounds that he would normally have gotten the position, but was happy to stay doing what he was

⁴⁵ Now *Trachypithecus johnii*, the Nilgiri Langur.

⁴⁶ Elliot, 'Memoir on T. C. Jerdon', 151.

⁴⁷ NAI/Home/Pub. 1864, Part B. Proceedings 6th November. Nos. 32–33. Subject: Debt of Dr. T. C. Jerdon to Gopalsawmy Naidoo.

with the confirmation of Balfour in the role, upon which he would pay Gopalsawmy Naidoo's agents Messrs. Gillanders Arbuthnot, the sum of Rs. 200 per month.⁴⁸ Jerdon had stated as much, so far as the issue of the appointment went, in a letter to the Undersecretary to the Government several months earlier the same year. In it, he responded to the query as to when the proposed work on the 'vertebrated animals of India' would be completed by giving a time of fourteen months, between 1 January 1864 and 25 February 1865. He also expressed his gratitude for the increase in allowance he believed he would be sanctioned in light of a junior being appointed to the post of Deputy Inspector of Hospitals (see argument above) as well as in the larger pursuit of the interest of science as befitting 'a great and powerful government' and in consideration of his long and uninterrupted service of 28 years.⁴⁹

However, the Government had been made aware of Jerdon's dilly-dallying on the issue of the debt for some time. The Undersecretary responded three days later on behalf of the Viceroy to indicate that an equitable conclusion to the matter was first necessary. Jerdon swiftly acknowledged the letter, explaining that he had written to his creditor that very day in an endeavour to reach a satisfactory settlement, even as he hoped that the Viceroy would in the meantime continue his deputation on special duty for such a period as the Viceroy saw fit.⁵⁰ The reply from the Home Department included both a carrot and a stick. The Viceroy, the letter stated, was pleased to permit Jerdon to proceed with his special work, along Jerdon's terms as conveyed in his letter of 12 January subject to orders (apparently issued on 13 July the previous year) that unless he was able to meet the just claims of his creditor that had remained so long unsatisfied, the Government would act to have Jerdon replaced at the disposal of the Madras Government.⁵¹

⁴⁸ Ibid.

⁴⁹ NAI/Home/Pub. Series B. Proceedings 16 March 1864. Nos. 46-48. Subject: Correspondence on the subject of Dr. T. C. Jerdon's continued employment on the special work on which he has been engaged in the Madras Presidency + of his indebtedness to Gopalsawmy Naidoo (Handwritten). Pp. 13-15. Letter from Surgeon Major T. C. Jerdon to the Undersecretary to the Government of India, Calcutta, dated 12 January 1864.

⁵⁰ Ibid., 17-19. Letter from Surgeon Major T. C. Jerdon, Highsar, to E. C. Bayley, Esqn. Secretary to the Government of India, dated 24 February 1864.

⁵¹ Ibid., Letter from the Home Department, Fort William, to Surgeon Major T. C. Jerdon, Umballa, dated 16 March 1864.

There was another private memorandum, dated 28 January 1864, which drew Jerdon's competence as a professional medical administrator into question. The memo pointed out that the appointment of Dr Balfour as Deputy Inspector of Hospitals, which Jerdon considered a *fait accompli*, was really only in an acting capacity at the time. Jerdon himself had suggested that he had every belief that he would have succeeded to the position, had he been on other duty. The Principal Inspector General, however, had confidentially demurred, observing that in his opinion, Dr. Jerdon did not have 'a special aptitude for the office of Deputy Inspector General of Hospitals, while he has a most marked facility for the service to which he has more specially devoted himself'.⁵² The sentiment was endorsed by Sir William Denison (1804–1871), Governor of Madras from 1861, and for two months, following the death of Lord Elgin (1811–1863), Governor-General and Viceroy. Denison stated, 'I do not believe him to be a good practicing medical man, neither do I think him qualified to act as Deputy Inspector General of Hospitals'. However, given Jerdon's seniority at the time, it would, Denison admitted, have been difficult to refuse his claim, were he to have made it.⁵³ There was another issue to be considered. Jerdon had stated that he hoped to retire after 28 February 1865, and the memorandum suggested that perhaps he might be offered the extension on his work to such a temporal point as he had sought, with the proviso that 'positively no further extension beyond that date will under any circumstances be granted to him'.⁵⁴

That such an enjoinder was not hard and fast became clear in 1865, admittedly under somewhat extenuating circumstances. In the interim, a new set of Retiring Rules had been promulgated, on which Jerdon seized so as to seek an additional year in India (which he was seeking to do in any case, ostensibly in a private capacity), so as to complete his work on the Mammals and Reptiles.⁵⁵ To advance his cause, he enclosed a positive review of his work that had appeared in the *Annals and Magazine of Natural History* (Vol. 78: 571, June 1864) and a copy of a letter from the

⁵² Ibid., 1–12. Private Memorandum in the Home Department.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ NAI/Home/Pub. 32–34 (Series A). Piece 2. 1865, 7 March. Application from Surgeon Major Dr. T. C. Jerdon, Umballa, to E. C. Bayley, Secretary to the Government of India, for a renewal of his special duty from 1 March 1865 to the end of February 1866, to complete his work on the Birds of India, dated 12 February 1865.

naturalist, although linked to one of Jerdon's strengths, on which he had relied more than was evidently wise.

Of a spare active form, with an imperturbable good temper, he cared neither for fatigue nor privations in his wanderings; and being gifted with the power of rapid and accurate discrimination, he could detect at a glance peculiarities of form or habit indicative of a difference of species, even in birds on the wing. If he had recorded his observations methodically as they were made, he would have accumulated a store of facts of the highest value. Instead of this, it was his practice merely to figure every species, both those captured by himself and those already depicted by others, for which purpose he generally retained the services of a native draughtsman; or, on emergencies, made rough tinted or pencil sketches himself. Of these, which were of uniform octavo size, he noted a few particulars of measurement, habitat, &c., and trusted to a retentive memory for details. But such materials were insufficient for that exact definition of characters on which a genus or species can be recognized and accepted. Hence his lists are often found to be defective because prepared from the figures alone, when his type specimens were out of reach, or when owing to the movements entailed by duty and the desire to visit new scenes, combined with habitual carelessness, they had been lost or destroyed.⁷⁸

The Mammals of India was first printed in Roorkee in 1866, appearing publicly the next year and dated as such.⁷⁹ If Jerdon's shortcomings as enumerated above were not enough, the errors were compounded by a series of copy mistakes at the printer's, though these, admittedly, were beyond Jerdon's control. The corrections would occur only with the edition out of London in 1874, an edition its author would not live to see. The classification, consistent with the time, was as follows (see Table 6.4):

Jerdon's hope, as stated in the preface to *The Mammals of India*, was that the manual would be as useful as that on birds, and he knew that many sportsmen and observers had been keenly awaiting its appearance. While admitting to the imperfections of the book, particularly with regard to incompleteness for particular groups, including the bats, shrews, rats and mice, he trusted that the work would spur further efforts to

⁷⁸ Elliot, 'Memoir of Dr. T. C. Jerdon', 149–150.

⁷⁹ Thomas Caverhill Jerdon, *The Mammals of India: A Natural History of all the Animals known to inhabit Continental India* (Roorkee: Thomason College Press for the author, 1867). The English edition was published by J. Wheldon in London in 1874.

Table 6.4 The Mammals of India (Jerdon, 1867)

Order	Suborder/ Tribe	Family	Subfamily	No: of Genera	No: of Species
Primates		Simidae		4	9
		Lemuridae		2	2
Cheiroptera		Pteropodidae		2	3
		Vampyridae	Megadermatinae	1	2
			Rhinolophinae	4	14
		Noctilionidae	Taphozoinae	1	3
			Noctilioninae	1	1
		Verpertilionidae	Scotophilinae	3	15
			Vespertilioninae	8	17
Insectivora		Talpidae		1	2
		Sorecidae		4	16
		Erinaceidae		1	2
		Tupaiaidae		1	2
Carnivora	Plantigrada	Ursidae		2	4
		Melididae		3	3
		Mustelidae	<i>Mustelinae</i> (?)	2	4
			Lutrinae	1	3
		Felidae		1	15
		Viverridae	Hyaeninae	1	1
			Viverrinae	6	16
Insectivora		Talpidae		1	2
		Sorecidae		4	16
		Erinaceidae		1	2
		Tupaiaidae		1	2
Carnivora	Plantigrada	Ursidae		2	4
		Melididae		3	3
		Mustelidae	<i>Mustelinae</i> (?)	2	4
			Lutrinae	1	3
		Felidae		1	15
		Viverridae	Hyaeninae	1	1
			Viverrinae	6	16
	Cetacea	Canidae		3	7
		Delphinidae		3	5
		Balaenidae		1	1
Rodentia					

(continued)

Table 6.4 Continued

Order	Suborder/ Tribe	Family	Subfamily	No: of Genera	No: of Species
Ungulata	Proboscidea Perissodactyla Artiodactyla Ruminantia Sirenia	Sciuridae	<i>Sciurinae</i> (?)	3	20
			Arctomydinae	1	2
		Muridae	Murinae	7	32
			Arvicolinae	2	2
		Hystriidae	Hystriinae	1	3
		Leporidae		2	3
		Elephantidae		1	1
			Rhinocerotidae	1	2
		Equidae		1	1
		Suidae		2	2
			Cervidae	1	2
			Cervinae	1	2
			Rusinae	4	5
		Moschidae		2	2
		Bovidae	Antilopinae	4	4
			Caprinae	4	8
Edentata			Bovinae	2	2
				1	1
		Manidae		1	2
Total				96	242

render in time a more complete volume on mammals. He closed with the hope that the volume on reptiles would soon be published. Unfortunately, that desire would not be realized, as indicated earlier. The proofs for the *Reptiles* arrived only after his death at Norwood, South London, in 1872, and in the next couple of years his collections and drawings were sold at various auctions and thus dispersed.

Nonetheless, Jerdon's effort marked the first serious attempt to provide a systematic account of the Vertebrates of India and in that regard, he achieved in part what two decades earlier, Brian Houghton Hodgson with his proposed *Fauna Nepalensis*, and Edward Blyth, with dreams of a *Fauna Indica*, could not. As Elliot would remark in Jerdon's obituary,

Although he did not live to complete his grand design, he accomplished enough to be of incalculable value to the lovers of natural history

scattered over the length and breadth of that vast country in which he laboured so zealously himself... Works of greater pretension and more accurate detail have been given to the public and at a cost beyond the reach of ordinary students. To no one is Indian science more indebted as to Mr. Jerdon, not for his discoveries, considerable as they were, but for enabling others to follow his steps.⁸⁰

The curate's egg that was Jerdon's life and contribution is perhaps encapsulated in the following account. Of four famous recorded ornithological extinctions from India the Himalayan Quail (*Ophrysia superciliosa*)—1876, the Forest Owlet (*Athene blewitti*)—1884, the Jerdon's Courser (*Rhinoptilus bitorquatus*)—1900,⁸¹ and the Pinkheaded Duck (*Rhodonessa caryophyllacea*)—1935, only the species associated with the first and third have emerged from that sorry tale of seeming loss. The Forest Owlet was dramatically found as late as 1997 by Pamela Rasmussen of the Smithsonian Institution, and the Jerdon's Courser, named for its chronicler, eleven years earlier, with its celebrated rediscovery credited to Bharat Bhushan of the BNHS in 1986. On the other hand, the insolvent naturalist's last resting place in West Norwood cemetery, London, has long since been effaced, as I was sad to learn. Unable to locate his grave where it was apparently meant to be, I made enquiries to receive the following response on 19 July 2010, from Jillian Dudman of the 'Friends of the Cemetery':

I have looked in our chairman's gazetteer of Norwood notables and found this:-

JERDON, Thomas Claverhill (1811–1872) (Grave 13,852, square 91) Surgeon and zoologist. Assistant surgeon, Madras Army, 1835; surgeon, 4th Light Cavalry, 1852–61; surgeon, 11 Madras Native Infantry, 1861–2. Returned to England, 1864.⁸² Wrote on the birds and mammals

⁸⁰ Elliot, 'Memoir of Dr. T. C. Jerdon', 150–151.

⁸¹ The date 1900 is based on a 'presumably authentic' report by Howard Campbell, near Anantapur in present day Andhra Pradesh. W. T. Blanford states that he saw three birds of the species in 1867 and another two in 1871 near Sironcha, in the western part of Maharashtra. Jerdon himself recorded the bird in 1841–1842 in the Eastern Ghats, near Nellore and in Cuddapah, also in Andhra Pradesh. See R. Manakadan, 'The Enigmatic and Elusive Jerdon's Courser', *Hornbill* (2020), 10–14.

⁸² This date is incorrect—Jerdon returned to England only in 1870.