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1 At least from an Anglophone perspective, it can be difficult to retrieve the importance and the popularity of Buffon in eighteenth-century Britain. In part this difficulty results from the retrospective appreciation of Linnaeus as the creator of the system of classification and nomenclature still used by zoologists and botanists. He is consequently enshrined in the opening chapters of most introductory biology textbooks, while his contemporary Buffon is nowhere to be found. Buffon has received increasing attention from historians of science, who understand him in the terms of his contemporaries, as offering a serious alternative to Linnaeus. An additional context for understanding the appreciation of Buffon's work in eighteenth and early nineteenth-century Britain reflects the fact that scientific controversies often map onto non-scientific ones; many things may be at stake in them other than the explicit matter of debate. For example, during the eighteenth century, natural history research and imperial expansion were inextricably intertwined, as was demonstrated both by the far flung travels of Linnaeus' acolytes, and by the exotic creatures that populated Buffon's *Histoire Naturelle*. Naturalists thus understood their pursuit in political as well as academic terms. And perhaps less explicitly, they incorporated the biases and aspirations of their own culture into their scientific practice. Buffon thus offered British botanists and zoologists an alternative to one foreign ideology,

while at the same time (or from a different perspective) representing the political and scientific power of a rival nation.

2 Most British naturalists in the eighteenth-century, like those elsewhere in Europe, strove to establish a systematic approach to natural history that would allow their disciplines equivalent dignity to that enjoyed by the physical sciences. The increasingly numerous documents created to enshrine their efforts – the treatises and handbooks published for an ever-increasing and diversifying audience – suggested an obvious contrast with the chaotic miscellanies of preceding ages. Even the unsophisticated natural history primers produced for eighteenth-century children seemed well-organized in comparison with the most elaborate Renaissance productions, such as Edward Topsell's massive *Historie of Foure-Footed Beastes*.[1] The authors of works designed for adults offered both verbal and graphic proclamations of their concern with order. The minimum was an alphabetical table of contents, such as Thomas Bewick used in his very popular, but not particularly erudite *General History of Quadrupeds*. Bewick rather apologetically characterized the table as "our disregard of system," since it did not represent the organization of his entries, which, like those of many naturalists influenced by Buffon, embodied a loose notion of kinds.[2] Naturalists addressing more serious audiences offered more elaborate analyses, including not only contents listed systematically as well as alphabetically, but also graphic representations – diagrams, charts, or tables – of the systematic relationships between the major categories of animals.

3 Beneath the reiterated consensus about the novelty and value of zoological (and botanical) classification lay a great deal of disagreement and uncertainty about exactly what was being celebrated. While most British naturalists praised system in the abstract, their responses to particular systems were apt to be less cohesive. The very icons of classification – the tables and diagrams prefixed and appended to works of enlightenment zoology to distinguish them from the unstructured productions of previous ages – could illustrate this lack of unity. In *A Cabinet of Quadrupeds*, John Church hesitated between two schema, confessing that the "systematic arrangement...of Mr. Pennant...takes the lead; but for the use of those who may prefer the Linnaean arrangement, it has been added"; following the preface, both systems were displayed in tabular form.[3] Similarly, one of the

late eighteenth-century translators of Buffon included a chart in which Buffon's genera were laid out against those of Pennant. [4] Several decades later the cataloguer of the Ashmolean collection at Oxford surveyed available taxonomic options for organizing museum displays, before devising one "derived partly from Linnaeus, partly from Cuvier, with additions and improvements." To illustrate his difficulty – an embarrassment of riches – he included a synopsis of the rival arrangements of mammals propounded by Linnaeus, Blumenbach, Cuvier, Illiger, Fleming, and Latreille. [5]

4 The multiple possibilities demonstrated by such tables also called into question the standard synecdoche by which Linnaeus represented systematists in general. Admiration for Linnaeus was, to be sure, frequently and fulsomely expressed by his British contemporaries. For example, Joseph Banks referred to him as "our Master" in a letter to Thomas Pennant, and by the end of the century, according to a writer on agriculture and natural history, "the system of Linnaeus has obtained such marked approbation...as to supersede the necessity of...adverting to it." [6] But even Linnaeus's sincerest admirers might qualify their praise. While John Berkenhout proclaimed that "the Linnean system of Nature is now too universally adopted to require any defense or apology," he added that "if it be not the most natural, it is doubtless the most convenient." [7] William Borlase took "pleasure in acknowledging my obligations to him," but he also suggested that the Linnaean system still contained "a few obscurities and perhaps improprieties...yet...to be retouched." [8] And the preface to an appreciative late eighteenth-century account of Linnaeus's animal classification more darkly hinted that despite his "transcendent merits," he had attracted "the malevolent opposition…of numerous detractors." [9]

5 Even Linnaeus's early reception in Britain had in fact been mixed. During a visit soon after he had begun to make his scientific reputation, several eminent naturalists, including Sir Hans Sloane, whose collection ultimately became the foundation of the British Museum, were inclined to snub him on the grounds that "he wished to overturn the old systems, only to exalt his own name." [10] Later, complaints emerged about the volatility of Linnaeus's system of classification, which changed in each edition of the *Systema Naturae*; according to one English distillation of Buffon's natural history, "by comparing the fourth edition of Linnaeus's Systema Naturae with the tenth, we find

man is no longer classed with the bat, but with the scaly lizard."[11] Some critics queried the very principles upon which Linnaeus's classification was based. In 1759 a reviewer who found Linnaean taxonomy generally "arbitrary...chimerical...and...ill-grounded," particularly objected to the grouping of the dog with foxes and wolves and the horse with other hoofed animals; he suggested instead that the dog should follow the horse in natural history as it did in ordinary roads and farmyards.[12] And even in the nineteenth century, when, for most naturalists, Linnaeus had become a figure sufficiently remote to be revered and disregarded, he still occasionally aroused strong negative passions. For example, in his own work on mammalian classification, rather than piously claiming Linnaeus as an ancestor, William Swainson dismissed him as "radically wrong"; according to John Fleming, who associated the master with slavish disciples like Shaw, "the dogmas of the Linnean School" had been "conspicuously hurtful" and had "directly retarded the progress of Zoology in Britain."[13]

6 Such expressions of antagonism derived from various sources. Even during the heyday of enlightenment classification, gaps in the epistemic zeitgeist apparently left room for a lot of free-floating resistance to the very idea of system. Much of this resistance, especially on the part of naturalists and others uneasy with the intellectual distance that systematic classification interposed between the observer and the creature observed, crystallized around the renowned French naturalist Buffon. His voluminous and appealingly readable natural history was much more widely available in English translations and adaptations than was the uncompromisingly technical work of Linnaeus. Buffon was well-known among British naturalists as "the greatest enemy to Arrangement" in general and a severe critic of Linnaeus in particular.[14] In Buffon's view, as mediated to the anglophone reading public, "Nature...offers herself...in contradiction to our denominations and characters, and amazes more by her exceptions than by her laws."[15] His translator Oliver Goldsmith similarly declared that "saying an animal is of this or that kind is but a very trifling part of its history." He disparaged, for example, the systematic grouping of the hare and the porcupine "merely...from a similitude in the foreteeth" on the grounds that this "slight" resemblance obviated much more significant differences, which he identified as "no likeness in the internal conformation; no similitude in nature, in habitudes, or

disposition."[16] Resistance to the juggernaut of classification might also be obliquely expressed by means of an alternative format, the alphabetically organized dictionary or encyclopedia. Although dictionarists and systematizers shared an obvious goal – the pigeonholing of innumerable bits of information so that they would be easily retrievable – the logic of alphabetization, which tacitly recalled the outmoded bestiaries, ran counter to the logic of even the most arbitrary and artificial system devised by naturalists.[17] In his *New Dictionary of Natural History* William Frederic Martyn proclaimed that "the sublime disorder of Nature herself, too prolific to enumerate or arrange..., and the essential variations between the most celebrated Naturalists, who confound while they attempt to explain; first suggest the idea of offering Zoology to the world in a method hitherto unattempted...in the present work, we have emancipated ourselves from system."[18] Perhaps as a culminating gesture of defiance, his volumes lacked pagination as well as taxonomic structure.

7 This grumbling uneasiness could also reflect tensions more loosely relevant to zoological debate. The inescapable analogy between the intellectual comprehension of nature and the practical management of people and territory encouraged some naturalists to interpret Linnaean classification as a species of intrusive alien authority – relatively easy to bear, as foreign yokes went, but a foreign yoke nonetheless. Criticism of Linnaeus leveled from this perspective transformed him from the preeminent representative of the supranational community of naturalists to a usurping carpetbagger. The resentment shared by such critics implied no concommitant theoretical unity; there was no anti-Linnaean consensus about its desirable replacement. But whatever system any particular naturalist preferred to that of Linnaeus, it was likely to have a British originator or forebear, rather than one from across the Channel. The favorite candidate of patriotic naturalists was therefore not Buffon, but John Ray, frequently referred to as "our countryman" or "our illustrious countryman," and occasionally as "the Father of Natural History" or "the Aristotle of England." The stalwart John Fleming insisted that he was the father "not only of British, but of European natural history."[19] Many zoological authors opted to follow Ray's lead in the arrangement of their works. For example, Richard Brookes claimed that "no systematical writer has been more happy...in reducing natural history into a

form, at once the shortest yet most comprehensive."[20] And Gilbert White, the clerical author of the *Natural History of Selbourne*, felt that "foreign systematics are...much too vague...but our countryman, the excellent Mr. Ray is the only describer that conveys some precise idea in every term."[21]

8 Such nationalistic commitments added further complexity to a technical debate that was already vexed, slippery, and divisive.[22] Whether or not they appreciated Linnaeus' work, it became increasingly clear to eighteenth-century British naturalists – as, indeed, it had been clear to Linnaeus himself – that his system was artificial, in the sense that it tended to group animals on the basis of single characteristics such as "dentition or the form of feet," often selected largely for classificatory convenience.[23] The alternative, referred to as a natural system, would ideally take into account a range of information about each organism and thus generate systematic categories that reflected the subtle and complex order of nature itself.

9 But it turned out to be much easier to acknowledge the need for a natural system than actually to devise one; as J. E. Bicheno commented in 1827, during the period when this issue was under the most intense and antagonistic discussion, "the difficulties of the subject have not been duly appreciated."[24] Zoologists attempting to elaborate a natural classification immediately encountered the problem that artificial systems so neatly evaded. Each animal had too many characteristics for them all to be weighted equally; failure to discern or establish the "natural" hierarchy of attributes would produce a more complicated and less straightforward system than that associated with Linnaeus, but one that in the end was no less artificial.

10 By the middle of the nineteenth century, Buffon had dropped out of scientific sight, and most British naturalists considered the classificatory principles of Linnaeus to be quaint and artificial. However, one major component of his work survived with its authority apparently little diminished. As a committee of the British Association for the Advancement of Science reported in 1842 with regard to "the *binomial system of nomenclature*, or that which indicates species by means of two Latin words, the one generic, the other specific,...this invaluable method originated solely with Linnaeus."[25] Even the nationalistic John Fleming paused in the midst of denouncing the

"greatly overrated" Swede to make a grudging nomenclatural concession: "Linnaeus was not, it is true, without much merit, in rendering trivial names [that is, technical species names] popular."[26] Fleming used the word "popular" in a rather restricted sense, referring only to the acceptance of "trivial names" within the community of naturalists. Indeed wider acceptance might have made them less popular among Fleming's own cohort. For at the same time that it provided a newly systematic means of referring to animals and plants, Linnaean terminology also offered a newly definitive means of discriminating between the zoological knowledge of specialists and the implicitly less significant and reliable information about animals that was broadly available to ordinary Britons. It redefined a reservoir of traditional lore as the turf of experts, at the same time that it opened a new arena for international rivalry.

11 At the beginning of the eighteenth century, in the opinion of most subsequent naturalists, the names of animals had been at least as likely to hinder zoological investigation as to advance it. The long centuries during which animal lore had been unsystematically accumulated, either by pedantic bestiarists or by unschooled countryfolk, had left at once too many names and too few. Any familiar, or even widely recognizable animal was likely to have accumulated an abundance of synonyms in every European vernacular. This superfluity often made it difficult for naturalists to recognize that they were discussing the same creature. The hippopotamus, for example, which few contemporary Europeans had actually seen, had nevertheless accumulated names in Latin, Greek, French, and Tgao (an African language); its English appellations included river horse, sea horse, behemoth, river paard, and water elephant.[27] On the other hand, a single name might signify several distinct, if similar creatures. Anglophone adventurers were apt to refer to both the jaguars of South America and the leopards of Africa and Asia as "tigers." Naturalists had repeatedly attempted to rise above this vulgar polyphony by coining names in the learned tongue of Latin, but in so doing, they simply produced an additional layer of confusion. Thus, by the early eighteenth century, the leopard and the panther had, between them, accumulated the Latin denominations of *Panthera*, *Pardus*, *Pardalis*, *Leopardus*, and *Uncia*, some of which were occasionally applied to the

cheetah (then usually termed the "hunting leopard" in vernacular English), the jaguar, and various lynxes as well.

12 This unmanageable profusion of names, with its concomitant blurring of the boundary that distinguished scientific expertise from other modes of knowledge, was a constant irritant to working naturalists. And if the multiple and inadequately delimited names of well-known creatures could impede the progress and undermine the dignity of research, the effect of such problematical nomenclature on the study of unfamiliar animals was still more pronounced. The propensity of early explorers to name American creatures after those of the old world produced widely lamented consequences; indeed, the surviving names of the mountain lion or panther and robin still cause transatlantic confusion. As one English interpreter of Buffon put it, "to avoid falling into perpetual errors, it is necessary to distinguish carefully what belongs to the one continent from what belongs to the other."[28]

13 A more persistent non-specialist source of zoological information inspired similarly mixed responses. Indigenous peoples had unmatched access to the fauna among which they lived. Despite their alleged indifference to systematic natural history, therefore, every scrap of data they offered appeared at least worthy of scrutiny. According to the anatomist John Hunter, "even the name given by the natives should be known if possible; for a name to a naturalist should mean nothing but that to which it is annexed."[29] Although it was potentially illuminating, however, such evidence was also considered unreliable and difficult to interpret. It posed problems similar to those embedded in the accounts of naive Europeans. Indeed, sometimes these two kinds of sources were conflated, as if the shared lack of zoological expertise could unite colonial peoples otherwise divided by race and nation.

14 Nineteenth-century naturalists felt that they could afford to disparage the nomenclatural chaos that had been pushed to the temporal and geographical peripheries – and to use command of nomenclature to separate initiates from non-initiates – because of their faith in the comprehensiveness and order of the system of naming attributed to Linnaeus. Useful though it incontestably was, however, Linnaean nomenclature proved far from flawless. One shortcoming was that, despite its celebrated novelty, it could be confused with discarded pre-

enlightenment terminology. Because of their classical form, Linnaean terms often resembled those employed by earlier naturalists and bestiarists, whose Latin binomials and trinomials were, however, simply abbreviated or economical descriptions, not unique and systematically generated designations.[30] In addition, the deployment of Linnaean nomenclature was far from simple. It required that a complex and ambiguous set of rules be applied to raw material that could be characterized in the same terms, by naturalists who themselves varied widely in culture, disciplinary background, and personal commitment. Perhaps it was not surprising that their nomenclatural applications showed equivalent divergences as well as inconvenient overlaps.

15 As in the pre-Linnaean period, designations proliferated, albeit in the prescribed form of latinate binomials and trinomials. An early nineteenth-century owner of the 1793 edition of Thomas Pennant's *History of Quadrupeds* repeatedly found the list of latinate synonyms that began each entry to be insufficient; he was frequently obliged to pencil additional designations in the margins.[31] In 1830, the museum of the Zoological Society of London was criticized for the "barbarous assemblage of names, as if to describe all the mongrels in creation" with which a single stuffed wild goat was labelled.[32] And in 1896, looking back on more than a century of post-Linnaean primate nomenclature, Henry O. Forbes abjured the attempt to "write a synonymy of the species of Monkeys" – that is, to collect all the names by which naturalists had denominated each species. Not only was the relevant information "scattered over many, often obscure, periodicals," but he feared that the consequence of assembling it might be "to introduce a great deal of confusion."[33]

16 To a certain extent these gaps between the promise of Linnaean nomenclature and the results it actually delivered reflected technical problems incident to the work of natural history. To ensure that an apparently new species had not previously been discovered, described, and named by someone else, it was necessary, then as now, to search the literature. Networks of transportation and communication were constantly improving, but not fast enough to guarantee that naturalists would be able to locate and examine all potentially relevant reports – buried as they might be in the proceedings of obscure societies, published in many different languages. Even if a possible precursor emerged in the printed record, it might be difficult to

establish whether the two animals in fact belonged to the same species. A definitive judgment would require the comparison of specimens that might be irrevocably separated by geography or by condition of preservation, even assuming that they represented the same sex, age, or life phase. Few naturalists had the resources of time, money, and prestige to match the efforts made by Charles Darwin as he worked on his monograph about barnacles: for several years in the 1840s his house was filled with smelly specimens loaned by a global array of scientists, private collectors, and curators. [34]

17 Even if these formidable difficulties could be overcome, nomenclature might proliferate as a result of what were recognized as legitimate differences of zoological theory or practice. For example, then as now, taxonomists were divided into "splitters" inclined to recognize species and higher taxa on the basis of relatively slight differences, and "lumpers" who advocated a higher threshold for separation. [35] For example, although Linnaeus had established a single genus, *Equus*, to accommodate the horse and its close relatives, many subsequent naturalists wished to acknowledge subdivisions within this group by creating separate genera for asses (*Asinus*) and for zebras (*Hippotigris*).

18 Nineteenth-century naturalists were, of course, perfectly aware of these problems, which they regularly lamented at the same time, if not in the same paradoxical breath, that they celebrated the transformation in their discipline wrought by the introduction of binomial nomenclature. [36] In 1833 a contributor to the *Field Naturalist* "regretted that...the language of zoology and botany is necessarily changing. And what is the consequence? we are overburdened with synonymes,...[which] create as much, if not more, confusion than did the provincial terms, in the absence of scientific nomenclature." [37] Nor was their reaction to this oddly intractable situation limited to lamentation. The 1840s saw the beginning of a sustained effort at reform on the part of establishment British zoologists. At the 1841 meeting of the British Association for the Advancement of Science, a committee with a small but distinguished membership was charged "to draw up a series of rules with a view to establishing a nomenclature of Zoology on an uniform and permanent basis." [38] The committee drafted a "Proposed Plan" which was circulated to a long list of British naturalists and a short list of foreigners; a "Proposed Report of the Com-

mittee on Zoological Nomenclature," modified in response to their comments, was printed in 1842 and the rules it suggested were adopted by the British Association.[39] These labors received a good deal of private and public praise. More tangible results were, however, thinner on the ground, and in 1865, after several disappointing decades, the British Association was moved to readopt the proposal, only slightly modified by the few surviving members of the original committee.[40] Again, the positive impact on zoological practice was difficult to discern.

19 Given the apparently mundane and pragmatic nature of the issues surrounding scientific nomenclature, it could be difficult to account for the tone of anxiety and passion that frequently crept into learned discussions of it. Thus the initial report circulated by the British Association committee characterized nomenclatural irregularity as an "evil," the result of "neglect and corruption"; it referred to Buffon's practice of christening new species only in the vernacular and not with latinate binomials as "vicious."[41] In his response to the draft proposal, W. J. Broderip, a successful lawyer as well as a respected naturalist, implicitly acknowledged the volatility of the topic when he warned against using words like "Parliament" or "legislation," which might give "the appearance of dictation" and thus "excite ridicule."[42] Such language suggested that more was at stake in establishing uniform and consistent zoological nomenclature than the elaboration of a merely technical order.

20 Indeed, the naturalists who drafted the original British Association proposal began by dismissing technical sources of confusion – "those diversities which arise from the various methods of classification adopted by different authors, and which are unavoidable in the present state of our knowledge" – as of secondary concern.[43] Instead, they focused their attention on discrepancies that arose from extra-scientific causes. Challenges to the intellectual authority of elite British naturalists were conflated with challenges mounted on other grounds, more clearly rooted in human nature and therefore more vulnerable to policing. Nomenclature became a medium upon which a variety of frailties and lapses and antagonisms could be inscribed, as well, inevitably, as the representative or symbol of those alternative behaviors and commitments. An energetically enforced standard of nomenclatural propriety would embody and reinforce hierarchical

order both inside the zoological community and in the larger society to which its members also belonged; at the same time it would identify inappropriate or troublesome colleagues. Consequently, the errors and eccentricities in nomenclature that attracted the most severe and protracted criticism from the British Association committee were those that most clearly associated their perpetrators with groups considered obnoxious for political or cultural or social reasons.

21 Some of the most provocative challenges were mounted from abroad. In an era of intense international military and political rivalry, scientific claims could be conflated with those of the polity in general; the competitive colonization of soldiers and diplomats had its analogue in the nomenclatural activities of zoologists. Naming constituted a strong, if metaphoric, claim to possession, not only of the newly christened species, but by implication of its native territory; conversely, territorial claims were easier to question in learned journals than on the battlefield. Sir Stamford Raffles, the founder of both Singapore and the Zoological Society of London, once found himself in the unhappy position of having to dismiss "two French gentleman who [had] appeared qualified" to help him with the preservation and description of the many specimens he had collected during his colonial service in southeast Asia, lest, as a result of what he called their "private and national views," "all the result of all my endeavours...be carried to a foreign country." What he feared was the integration of his specimens into a Gallicized nomenclature – which he characterized as "speculative and deficient in the kind of information required" – and their consequent loss, not only to himself but to his nation. [44] (The ornithologist John Gould attempted this maneuver in reverse when he named a species of large South American bird *Rhea darwinii*, even though it had already been otherwise christened by Alcide d'Orbigny. [45]) Thus, ironically, the Linnaean terminology originally designed to serve the supranational scientific community, and for that reason, among others, couched in latinate forms that recalled the universal language of medieval and renaissance learning, had come to replicate the separation of rival national cultures.

22 The prominence of political concerns, as well as the fact that, like Raffles, many naturalists also participated in the imperial enterprise as government administrators, military officers, or explorers, meant

that the first nomenclatural lapses singled out for criticism by the British Association committee were those committed by foreign naturalists. The published report of 1842 lamented that "the commonwealth of science is becoming daily divided into independent states...If an English zoologist...visits the museums and converses with the professors of France, he finds that their *scientific* language is no less foreign...than their *vernacular*."[46] In making this complaint, the committee followed a trail blazed by earlier British critics, who had identified aspects of the Gallic national character that might account for what they perceived as wilful and uncooperative divergence: the French "rage for innovation" and preference for "forever subdividing where the great aim should be to combine."[47] It was significant that France, Britain's traditional geopolitical rival, figured as the primary locus of the linguistic "despair" experienced by traveling British naturalists, with Germany and Russia mentioned only as afterthoughts, although their languages were much less accessible to most educated Anglophones. Perhaps even Buffon's practice would not have seemed so vicious if he had abjured latinate nomenclature for that of some vernacular other than French.

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1 On zoological works for juvenile audiences, see Harriet Ritvo, "Learning from Animals: Natural History for Children in the Eighteenth and Nineteenth Centuries," *Children's Literature* vol 14, 1985, p. 72-93; Edward Topsell, *The Historie of Foure-Footed Beastes*, London, William Iaggard, 1607.

2 Thomas Bewick, A *General History of Quadrupeds*, Newcastle, T. Bewick, 1824, p. iii, v-x.

3 John Church, A *Cabinet of Quadrupeds*, London, Darton and Harvey, 1805, I, n. p.

4 G. L. Leclerc, Comte de Buffon, *Natural History. . .with Occasional Notes. . .by the Translator*, London, W. Strahan and T. Cadell, 1781-85,, III, p. 5; VIII, p. 287-301.

5 [James] Duncan, *Introduction to the Catalogue of the Ashmolean Museum*, n. pub., ca. 1830, pp. 25-26, 31-41, 50.

6 Harold Burnell Carter, *Sir Joseph Banks, 1743-1820*, London, British Museum, Natural History, 1988, p. 46; James Anderson, *Recreations in Agricul-*

ture, Natural History, Arts, and Miscellaneous Literature, London, T. Bentley, 1799, I, p. 2.

7 John Berkenhout, *Synopsis of the Natural History of Great Britain and Ireland*, London, T. Cadell, 1795, I, p. v.

8 William Borlase, *Natural History of Cornwall*, Oxford, W. Jackson, 1768, p. ix.

9 Robert Kerr, The Animal Kingdom or Zoological System, of the Celebrated Sir Charles Linnaeus, London, J. Murray, 1792, p. 1.

10 William Jardine, *Humming-Birds*, Edinburgh, W.H. Lizars, 1833, I, p. 27-28.

11 [Georges Louis Leclerc, Comte de Buffon] *Barr's Buffon. Buffon's Natural History*, London, H. D. Symonds, 1797, VII, p. 53.

12 "An Essay on a Method of Classing Animals," *Annual Register*, 1759, quoted in A. J. Cain, "Natural Classification," *Proceedings of the Linnean Society of London*,174, 1963, p. 117, 119.

13 William Swainson, *On the Natural History and Classification of Quadrupeds*, London, Longman, 1835, p. 34; John Fleming, *The Philosophy of Zoology; or A General View of the Structure, Functions and Classification of Animals*, Edinburgh, Archibald Constable, 1822, I, p. vi-vii.

14 Dr. David Skene to John Ellis, 6 Oct. 1768, in Spencer Savage, ed., Catalogue of the Manuscripts in the Library of the Linnean Society of London. Part IV.--Calendar of the Ellis Manuscripts, London, Linnean Society, 1948, p. 30.

15 Buffon, *Barr's Buffon*, VII, p. 198.

16 Oliver Goldsmith, *An History of the Earth, and Animated Nature*, London, J. Nourse, 1774, III, p. 2-3; IV, p. 100.

17 See Richard Yeo, "Reading Encyclopedias: Science and the Organization of Knowledge in British Dictionaries of Arts and Sciences, 1730-1850," *Isis* 82, 1991, p. 28-29, and Wilda Anderson, *Between the Library and the Laboratory: The Language of Chemistry in Eighteenth-Century France*, Baltimore, Johns Hopkins University Press, 1984, p. 41-41.

18 William Frederic Martyn, *A New Dictionary of Natural History; or, Compleat Universal Display of Animated Nature*, London, Harrison, 1785, I, n.p.

19 [John Fleming], "*On Systems and Methods in Natural History*. By J. E. Bicheno," *Quarterly Review* 41, 1829, p. 303-304.

20 Richard Brookes, *New and Accurate System of Natural History*, London, J. Newbery, 1763, I, p. xi.

21 Gilbert White, *The Natural History of Selbourne*, ed. Richard Mabey, Harmondsworth, Middlesex, Penguin, 1977, p. 136.

22 Ernst Mayr has pointed out the paradoxical increase of parochialism within national or linguistic scientific communities after the Renaissance – in his view due to the disappearance of Latin as the universal language of scholarship – at the same time that the machinery of modern international intellectual exchange was being developed (*The Growth of Biological Thought: Diversity, Evolution, and Inheritance*, Cambridge, Mass., Harvard University Press, 1982, p. 109-110.

23 William Lawrence, *Lectures on Comparative Anatomy, Physiology, Zoology and the Natural History of Man*, London, R. Carlile, 1823, p. 68; Charles Hamilton Smith, *Introduction to Mammalia*, Edinburgh, W. H. Lizars, 1846, p. 76.

24 J. E. Bicheno, "On Systems and Method in Natural History," *Linnean Society of London Transactions* 15, 1827, p. 479.

25 Quoted in William Jardine, "Proposed Reform of Zoological Nomenclature," *Edinburgh New Philosophical Journal* N.S. 18, 1863, p. 266.

26 [John Fleming], "On Systems and Methods in Natural History. By J. E. Bicheno," *Quarterly Review* 41, 1829, p. 304.

27 Thomas Pennant, *History of Quadrupeds*, London, B. and J. Whilte, 1793, I, p. 111, 157.

28 Buffon, *Barr's Buffon*, London, H. D. Symonds, 1797, VI, p. 337.

29 John Hunter, *Essays and Observations on Natural History, Anatomy, Physiology, Psychology, and Geology*, ed. Richard Owen, London, John Van Voorst, 1861, II, p. 249.

30 Nehemiah Grew stated the rationale for such non-systematic Latin designations in the preface to *Musaeum Regalis Societatis. Or A Catalogue and Description of the Natural and Artificial Rarities Belonging to the Royal Society*: "the Names of Things should be always taken from something more observably declarative of their Form, or Nature....For so, every Name were a short Definition." London, W. Rawlins, 1681.

31 Author's copy. Such emendations were especially frequent for animals like the kangaroo, which attracted zoological attention on other grounds.

32 *Zoological Keepsake*; *or Zoology, and the Garden and Museum of the Zoological Society, for the Year* 1830, London, Marsh and Miller, 1830, p. 152.

33 Henry O. Forbes, A *Hand-book to the Primates*, London, Edward Lloyd, 1896-1897, I, p. vii.

34 Adrian Desmond and James Moore, *Darwin*, London, Michael Joseph, 1991, ch. 22.

35 Mayr, *The Growth of Biological Thought*, p. 240-241.

36 For discussions of the development of what has become the "International Code of Zoological Nomenclature" in the nineteenth century and after, see David Heppell, "The Evolution of the Code of Zoological Nomenclature," in Alwyne Wheeler and James H. Price, eds., *History in the Service of Systematics*, London, Society for the Bibliography of Natural History, 1981, p. 135-141; E. G. Linsley and R. L. Usinger, "Linnaeus and the Development of the International Code of Zoological Nomenclature," *Systematic Zoology* 8, 1959, p. 39-47; and Antonello La Vergata, "Au Nom de l'Espèce. Classification et Nomenclature au XIXe Siècle," in Scott Atran, et al., *Histoire du Concept de l'Espèce dans les Sciences de la Vie*, Paris, Fondation Singer-Polignac, 1987, p. 193-225.

37 Solitarius, "Remarks upon Zoological Nomenclature and Systems of Classification," *Field Naturalist* I, 1833, p. 523.

38 Nomenclature Papers, Hugh E. Strickland Collection, Cambridge University Museum, Scrapbook I, n.p. Original committee members included Darwin, J. S. Henslow, L. Jenyns, W. Ogilby, J. Phillips, J. Richardson, H. E. Strickland, and J. O. Westwood. W. J. Broderip, Owen, W. E. Shuckard, G. R. Waterhouse, and W. Yarrell joined later.

39 *Proposed Plan for Rendering the Nomenclature of Zoology Uniform and Permanent*, London, Richard and John E. Taylor, 1841; *Proposed Report of the Committee on Zoological Nomenclature*, London, 1842; Hugh Strickland, "Report of a Committee appointed 'to consider of the rules by which the Nomenclature of Zoology may be established on a uniform and permanent basis,'" *Report of the British Association for the Advancement of Science for* 1842, p. 105-121.

40 Jardine, "Proposed Reform of Zoological Nomenclature," p. 260-261; Heppell, "The Evolution of the Code of Zoological Nomenclature," p. 136-137.

41 *Proposed Plan*, p. 2, 3, 9.

42 W. J. Broderip to Hugh Strickland, 5 May 1842, in Nomenclature Papers, Hugh E. Strickland Collection, CUMZ, Scrapbook II.

43 *Proposed Plan*, p. 1.

44 Thomas Stamford Raffles (Communicated by Everard Home), "Descriptive Catalogue of a Zoological Collection, made on account of the East India Company, in the Island of Sumatra and its Vicinity," *Linnean Society of London Transactions* (1820-1821), p. 239-240.

45 Janet Browne, *Charles Darwin. Voyaging*, New York, Knopf, 1995, p. 360.

46 Strickland, "Report of a Committee," p. 106-107.

47 William Lawrence, "Introduction," to J. F. Blumenbach, A *Short History of Comparative Anatomy*, London, Longman, 1807, p. xvi; J. E. Bicheno, "On Systems and Methods in Natural History," *Linnean Society of London Transactions* 15, 1827, p. 494.

English

It is a commonplace of science (although less of the history of science) that Linnaeus definitively solved the vexing problems of taxonomy and nomenclature in the 18th century, thus freeing subsequent researchers to focus on more challenging problems. In fact the reception of the Linnaean system was slow and incomplete at the time, and much of his work was subsequently superseded. There were many sceptics among British naturalists, and examination of their responses to Linnaeus can illuminate both the nature of his work, and the social and intellectual contexts of contemporary natural history. It was generally accepted that the study of plants and animals required some kind of order--the mere accumulation of miscellaneous facts was no longer satisfactory. There were two main alternatives. One was nationalistic and relatively superficial--to accept the Linnaean agenda, but to suggest that it had been accomplished earlier and/or better by British scholars (John Ray was the most frequent, but not the only candidate for this honor). The other was to prefer a non-Linnaean mode of ordering--that is, a way of organizing the plant and animal kingdom that employed apparently different principles, often one that acknowledged more obvious and familiar differences and familiarities. These anti-systematists (as they often misleadingly called themselves) were inclined to rally behind the countervailing authority and prestige of Buffon. Buffon also figured cryptically in merely nationalistic anti-Linnaeanism, through the mechanism of unacknowledged borrowing.

Français

Il est communément admis dans les sciences (encore que ce soit moins le cas dans l'histoire des sciences) que Linné résolut définitivement les problèmes irritants de taxinomie et de nomenclature au XVIII^e siècle, libérant les générations de chercheurs à venir, et leur permettant ainsi de se consacrer à des tâches plus laborieuses. En vérité, la réception du système de Linné fut lente et incomplète en son temps, et une grande partie de son travail fut par la suite supplanté. Il se trouvait grand nombre de sceptiques parmi les naturalistes britanniques, et l'examen de leurs réponses à Linné illumine à la fois la nature même de son travail, et le contexte social et intellectuel de l'histoire naturelle contemporaine. Il était généralement admis que l'étude des plantes et des animaux requérait un ordre quelconque—la simple accumulation de faits épars ne se trouvant plus satisfaisante. Deux types d'alternatives s'offraient donc. L'une était nationaliste et relativement superficielle : bien que l'on acceptât l'agenda de Linné, l'on suggérait que celui-ci avait déjà été réalisé avant lui, et/ou de manière plus achevée, par des scientifiques britanniques (John Ray fut le plus cité, mais pas l'unique, des candidats à cet honneur). L'autre alternative consistait en l'adoption d'un mode d'ordonnance non-Linnéen—c'est-à-dire, d'une manière d'organiser la faune et la flore selon des principes en apparence différents, admettant souvent des dissimilitudes et des ressemblances à la fois plus familières et plus évidentes. Ces « anti-systémiques » (comme ils se nommaient souvent eux-mêmes à tort) étaient enclins à se rallier à l'autorité et au prestige de Buffon. Buffon se situait lui aussi, de manière cryptique, dans la ligne de tir d'un anti-Linnéisme purement nationaliste, par lequel nos scientifiques britanniques s'inspiraient du naturaliste français tout en omettant de reconnaître leurs emprunts.

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