ONE Introduction

The Peace Offering That Stank

On the 9th of November, 1819 the distinguished New York physician-naturalist, Samuel Latham Mitchill, received at his Barclay Street chambers a malodorous packet containing an over-ripe orange file fish (*Aluterus schoepfii,* Walbaum, 1792) that had run afoul of a Long Island boating party several days earlier and had succumbed to "the stroke of an oar" on the beach near Bowery Cove. This rank offering arrived in the company of an explanatory letter from the Irish Jacobin lawyer William Sampson, the doctor's fellow member of the Literary and Philosophical Society of New-York, and his sometime adversary in the courts of the city.

"The fish begins to have an ancient and more than fish like smell," wrote Sampson by way of greeting, and he continued, "I send it to you, that you may either pass judgement upon it or record its characters before it undergoes more alteration." Could the specimen be a hitherto unknown species, something strange and new? To assist Mitchill on this question, Sampson had gone so far as to enclose a "colored drawing" prepared by his daughter to capture the creature's appearance in its fresher state.[1]

Dr. Mitchill knew better, and he made a terse note overleaf, identifying the genus and species. Not only was it not new, Mitchill himself had already published on it, and in his annotation on the letter he cited his 1815 monograph on "The Fishes of New-York," writing across the covering flap, " . . . already described in the Lit. & Ph. Transactions of NY."

It was, in a way, a familiar ritual. Mitchill's ichthyological knowledge was, by 1819, legendary in New York and beyond, so much so that he

[1]Letter from William Sampson, 9 November 1819, Gratz Collection, Historical Society of Pennsylvania. The addressee of this letter has not previously been identified. It is worth noting that Sampson's salutation is an oblique reference to *The Tempest,* act 2, scene 2, where Trinculo, examining Caliban, declares, "A fish; he smells like a fish; a very ancient and fish-like smell; a kind of not-of-the-newest Poor-John [i.e., salted hake]. A strange fish!" The allusion is a specimen of the relentlessly referential eloquence of Sampson and Mitchill both. A general note on citations in this book: spelling has not been modernized in quotations from original sources, but punctuation has in some cases (addition of apostrophes in contractions, etc.) been brought into line with current conventions.

could be satirized in doggerel in the New York papers as the "Phlo'bombos of our Icthyology [*sic*]," a title cobbled out of Mitchill's inelegant (if erudite) neologism for Robert Fulton's wondrous new invention, the steamboat, which the doctor proposed might properly be known as the "phlogobombos."[2] Moreover, Mitchill's boosterism for natural-historical investigation in the young Republic had garnered him an expansive circle of correspondents who frequently sent him unusual animals, plants, and rocks as accessions to his collections, or for classificatory consultations.[3] Mitchill—who would go on to be memorialized as the "Nestor of American Science"—had lectured on zoology at Columbia College and at the College of Physicians and Surgeons from their inceptions, and he was famous for offering his students a Cuvier-esque declaration of his taxonomic mastery of sea creatures, announcing boldly to them, "Show me a fin, and I will point out the fish."[4] Nor was this simply the encyclopedism of a cabinet natural historian, one who hid among his dusty books and old specimens: Mitchill was well known for taking his ichthyology to the street. A familiar of the New York fish market, he brought his students to the docks to practice their skills of identification on the catch of the day, and he boasted that more than half of the new fish species he had discovered could be found in that piscatorial emporium.[5]

[2]Joseph Rodman Drake, *Poems, by Croaker, Croaker and Co. and Croaker, Jun.* (New York: For the Reader, 1819), pp. 26–27.

[3]Courtney Robert Hall, *A Scientist in the Early Republic: Samuel Latham Mitchill, 1764–1831* (New York: Columbia University Press, 1934), p. 83; Mitchill to DeWitt Clinton, 20 February 1826, DeWitt Clinton Papers, Columbia University Rare Books and Manuscript Library. See also the papers of Jeremy Robinson (in the Peter Force Collection, Manuscript Division, Library of Congress), a commercial agent in South America in the early nineteenth century, who corresponded with Mitchill.

[4]The French naturalist par excellence, Georges Cuvier, was famous at the time for his boasted ability to identify whole animals from a mere tooth or stray bone. The anecdote in connection with Mitchill can be found in John W. Francis, *Old New York, or, Reminiscences of the Past Sixty Years* (New York: C. Roe, 1858), p. 94. Interestingly, there is evidence that he was taken up on this challenge. The Columbiana Collection in the Rare Books and Manuscript Library at Columbia University (s.v. Mitchill) contains a letter from Mitchill to Edward Neufville (5 July 1822) identifying a species of tropical herring from several scales forwarded by a curious correspondent. Mitchill received a good deal of ribbing in the press concerning this vaunted skill, for instance: "'*Ex pede Herculem,*' said the ancient artist, 'I can tell Hercules from his toe'—'*Ex dente animal,*' says Cuvier, 'give me the bone, and I will describe the animal'—'I go further,' says the immortal Mitchill, 'show me a single scale, and I will let you know the fish that owned it.'" See *American,* 20 November 1820, p. 2.

[5]Charlotte M. Porter, *The Eagle's Nest: Natural History and American Ideas, 1812–1842* (Tuscaloosa: University of Alabama Press, 1986), p. 34. See also Samuel Latham Mitchill, *Picture of New-York, or, The Traveller's Guide through the Commercial Metropolis of the United States* (New York: I. Riley, 1807). For Mitchill giving instruction in the Market, see Reuben Haines to

But this particular specimen of New York waters represented more than just another missive from some friendly fisherman. This fish, rightly understood, was nothing less than a subtle peace offering from the legal establishment of the city. For that boating party on Bowery Cove had included not only the highly visible attorney, belletrist, and serial pamphleteer Sampson, but also Richard Riker, the City Recorder, who sat as the presiding official in most of the trials held in the Mayor's Court of New York City. Together these two men had elected to deliver their odd catch up to Mitchill "as a tribute to science and a token of continuing friendship." Swelling to oratorical excess (as he was wont to do), Sampson, Mitchill's "humble servant," sang the praises of New York's philosopher-king:

> What an empire is that of a man of learning. The King of England by his prerogative gets royal fish and very few indeed of them. You get from all quarters the willing tribute of sea and land, and I sincerely hope this that we send may be an acquisition to you and an addition of the stock of knowledge you have treasured up for mankind, and with which you have so much enriched science and the arts.[6]

It was an elegant rhetorical flourish, this invocation of the "royal fish" of the English Crown, and a delicately oblique gesture at the subtext of Sampson's letter. The "royal fish" was, as any Edinburgh-trained ichthyologist (or Lincoln Inn lawyer) knew, the whale, which had been the special possession of the throne since the fourteenth century.[7] For the English, a king, and for that king, tribute in the form of each beached whale; for the citizens of the land Mitchill had dubbed "Fredonia," no royal prerogatives, only the preeminence of Jefferson-style political sages (like Mitchill, himself a former senator and a state representative, with almost a decade of service in Washington), men whose leadership would forever be founded on an intimacy with the natural productions of

James Pemberton Parke, 25 February 1812, folder 128, series ii, Ruben Haines Papers, American Philosophical Society. See also Simon Baatz, "Knowledge, Culture, and Science in the Metropolis: The New York Academy of Sciences, 1817–1970," *Annals of the New York Academy of Sciences* 584 (1990), pp. 1–269, at p. 17.

[6]Letter from William Sampson, 9 November 1819, Gratz Collection, Historical Society of Pennsylvania.

[7]Whales and sturgeon shared this title. The term "Fishes Royal" first appears in a statute of 1324. See Adriaen Coenen, *The Whale Book: Whales and Other Marine Animals as Described by Adriaen Coenen in 1585,* edited by Floike Egmond and Peter Mason (London: Reaktion, 2003), p. 6.

American shores. For Mitchill, then, philosophical tribute in the form of a wizened file fish from the Fredonian strand.

Under ordinary circumstances the courtesy might have seemed strained (if not odd), the conceit labored. But Mitchill would have had no difficulty understanding the allusion: Sampson was offering, in the stinking packet, in the elaborate invocation of the *Praerogativa Regis,* a small token of deference to the man who had recently become the butt of considerable public ridicule where whales and fish were concerned, ridicule occasioned by a very public zoological showdown with Sampson himself.

For on the 30th of December of 1818 Mitchill had appeared in the packed chambers of the Mayor's Court in City Hall as the star witness in the case of *James Maurice v. Samuel Judd,* a dispute arising under a New York State statute that obliged purveyors of "fish oils" to ensure that their casks had been gauged, inspected, and certified. *Maurice v. Judd* had taken shape earlier that year, in the sweltering summer, when the well-known candle maker and oil merchant, Samuel Judd, had refused to pay the inspector's fee on three casks of spermaceti oil—protesting that the oil was not "fish oil" but "whale oil" and that whales were not, in fact, fish. The inspector, James Maurice, gave a derisive snort (whales not fish? ha!) and issued Judd a summons. The stage was thus set for a legal action that would ballot twelve sworn jurors to determine whether, in the state of New York, a whale was a fish. Sampson represented the plaintiff, Maurice, who was suing to collect the statutory fines. Mitchill, ichthyologist extraordinaire, appeared as the heart of the defense, carrying the standard of modern taxonomy. The recorder, Richard Riker, presided as judge. This two-day trial, which became a pageant of natural historical erudition and a sensational *agon* for settling natural and social order, would represent a remarkable instance of science at the bar in the nineteenth century, and it would live in popular memory and in the works of classifying naturalists for decades, not least because of William Sampson's transcript of the trial, *Is a Whale a Fish? An Accurate Report of the Case of James Maurice against Samuel Judd.*[8] This pamphlet appeared in bookshops in the summer of 1819.

The autumn of 1819 was thus a very suitable moment for the author of *Is a Whale a Fish?* (which would open Mitchill to new ribbing) to make gracious gestures toward one of the most powerful and politically connected men of learning in the city of New York.

[8]William Sampson, *Is a Whale a Fish? An Accurate Report of the Case of James Maurice against Samuel Judd* (New York: Van Winkle, 1819), henceforth abbreviated *IWF.*

Maurice v. Judd and the History of Science

This book takes up the unusual case of *Maurice v. Judd,* reconstructing the trial itself from available published and manuscript sources, rehearsing (wherever possible) the biographies of the persons involved, tracing textual allusions and references, situating the legal, political, and scientific arguments made in the proceedings, and detailing the public response to, and enduring legacy of, this event. Broadly, I aim to recover the trial and reveal its larger historical significance.

Why bother? This case merits the reader's attention for three reasons. First (and most narrowly), *Maurice v. Judd* represents a telling episode in the history of science in the early Republic, and in New York in particular. Where New York itself is concerned, the trial sheds light on the status of "philosophy" (and "philosophers") in general, and natural history specifically, during critical years in the emergence of the city's learned institutions and intellectual culture.[9] Broadening the focus to the Republic as a whole, the case invites us to revise a dominant theme in the literature treating the history of the natural sciences in the United States in the first half of the nineteenth century, a theme that relentlessly emphasizes the way that natural history served as a tool (and proxy) for an emerging "American identity" rooted in a kind of nature-nationalism.[10] Qualifications to this thesis are overdue.

[9]The best general treatment of the history of science in the United States in this period remains John C. Greene, *American Science in the Age of Jefferson* (Ames: Iowa State University Press, 1984). Particularly relevant is chapter 4, "Science along the Hudson." Philip Pauly has focused on the natural sciences in the first chapter of his *Biologists and the Promise of American Life* (Princeton: Princeton University Press, 2000). Andrew John Lewis's dissertation ("The Curious and the Learned: Natural History in the Early Republic," Yale University, 2001) offers several detailed and helpful case studies. On the general issue of intellectual culture in New York City to 1830, see part I of Thomas Bender's *New York Intellect: A History of Intellectual Life in New York City from 1750 to the Beginnings of Our Own Time* (New York: Knopf, 1987). On science and learned societies in New York in these years: Baatz, "Knowledge, Culture, and Science"; Jonathan Harris, "New York's First Scientific Body: The Literary and Philosophical Society, 1814–1834," *Annals of the New York Academy of Sciences* 196 (1972), pp. 329–337; Brooke Hindle, "The Underside of the Learned Society in New York, 1754–1854," in *The Pursuit of Knowledge in the Early American Republic: American Scientific and Learned Societies from Colonial Times to the Civil War,* edited by Alexandra Oleson and Sanborn C. Brown (Baltimore: Johns Hopkins University Press, 1976); Kenneth R. Nodyne, "The Founding of the Lyceum of Natural History," *Annals of the New York Academy of Sciences* 172 (1970), pp. 141–149; and idem, "The Role of De Witt Clinton and the Municipal Government in the Development of Cultural Organizations in New York City, 1803–1817," Ph.D. dissertation, New York University, 1969.

[10]I am thinking here of works like David Scofield Wilson's *In the Presence of Nature* (Amherst: University of Massachusetts Press, 1978) and, more recently, Paul Semonin's "'Nature's Nation': Natural History as Nationalism in the New Republic," *Northwest Review* 30 (1992), pp. 6–41, and Christopher Looby, "The Constitution of Nature: Taxonomy as Politics

Second, this case offers a unique point of departure for a more general consideration of cetaceans (whales, dolphins, and porpoises) as "problems of knowledge" in the early nineteenth century. In these years whaling in the open ocean was rapidly becoming the young Republic's strongest claim to global preeminence and indefatigable enterprise. As early as 1775 Edmund Burke had pontificated in Parliament that the Yankee whalemen were sweeping the globe, and humiliating British seafarers with their daring.[11] By the 1840s some 600 American whaling vessels were plying the Pacific, vanguards of U.S. geopolitical ambitions, and a major source of national wealth.[12] In short, whales mattered to the early United States. And at stake in the trial of *Maurice v. Judd* was the essential nature of these unusual (and economically vital) animals—their form, habits, and place in the natural order. For this reason the testimony of different witnesses—European-educated men of science like Mitchill, New England whalemen, merchants and agents in the whaling industry, artisans and craftsmen accustomed to work with whale products—provides unique insights into who knew what about these creatures, and how they authorized their claims. In this book, then, the trial will afford the occasion for several brief departures, detours, loops out and away from the courtroom, in which we pause to consider, for instance, what whalers knew about the anatomy, physiology, and natural history of their quarry during this period. Other similar issues will receive attention: Where could New Yorkers (like the members of the jury) have seen whales or whale parts in 1818? What was the status of the whale in parlors, primers, and schools in the period?[13] Such digressions and amplifi-

in Jefferson, Peale, and Bartram," *Early American Literature* 22, no. 3 (1987), pp. 252–273. It is perhaps unfair to cherry-pick, but this quote is illustrative of the general claim I suggest we consider more closely: "The static displays of Peale's collection (and, within it, the mammoth, at its summit and center) reiterate the nation-building, class-constituting technique of collective incorporation through production and its display, or the process of assembly itself preserved and restored as the grounds of *E pluribus unum*." Laura Rigal, *The American Manufactory: Art, Labor, and the World of Things in the Early Republic* (Princeton: Princeton University Press, 1998), p. 94.

[11]The much-quoted speech reads in part: "whilst we are looking for them beneath the Arctic Circle, we hear that they have pierced into the opposite region of polar cold, that they are at the antipodes . . . whilst some of them draw the line and strike the harpoon on the coast of Africa, others run the longitude, and pursue their gigantic game along the coast of Brazil. No sea but what is vexed by their fisheries." Quoted in Jeremiah N. Reynolds, *Address, on the Subject of a Surveying and Exploring Expedition* (New York: Harper and Brothers, 1836), p. 7.

[12]For this story, see D. Graham Burnett, "Hydrographic Discipline," in *The Imperial Map,* edited by James Akerman, forthcoming from University of Chicago Press.

[13]The phrase is an allusion to Sally Gregory Kohlstedt, "Parlors, Primers, and Public Schooling: Education for Science in Nineteenth-Century America," *Isis* 81, no. 3 (1990), pp. 424–445.

cations will help contextualize the trial itself, even as they offer opportunities for a walk though the world of learning in the early Republic.

Third, and perhaps most importantly, *Maurice v. Judd* will serve as a window onto the contested territory of zoological classification in the late eighteenth and early nineteenth centuries. Here whales are only part of the story, albeit a more important part than has generally been recognized. According to a dominant narrative in the history of science, the second half of the eighteenth century represents the golden age of the classifying imagination, the period during which, under the presiding spirit of Linnaeus, nomenclature and systematic taxonomy reduced the oozy, Protean organism of the Renaissance world to a proper natural order, an order in which things had names and places in schematic hierarchies that were themselves (to a greater or lesser degree) reflections of the nature of things.[14] By the early nineteenth century, as this account goes, the labors of the enlightened classifiers had settled the lineaments of this natural tableau, and in so doing created the conditions of possibility for a series of iconoclastic and revisionist theories of the living and non-living world—theories less wedded to fixity and rigid types, and more interested in accounting for time, change, and the genealogy of a world increasingly seen as deeply, rather than superficially, contingent (cue the Darwinian revolution). In an imaginative series of essays published as *The Platypus and the Mermaid,* Harriet Ritvo has worked to destabilize this familiar account of the "heroic age of scientific classification."[15] It is her claim that historians of science have largely overlooked "quite a different zoological enterprise—one in which consensus was rare, in which authority was uncertain and fragmented, and in which the very principles behind the construction of taxonomic systems and the assignment of individual species to their niches were vaguely defined and of obscure or questionable provenance."[16] By focusing on problematic cases and anomalous organisms, and by situating the debates of learned classifiers in the broader context of lay expertise among turn-of-the-century English animal breeders, hunters, farmers, and fanciers, Ritvo

[14]The now classic (if contested) statement is that of Michel Foucault (*The Order of Things: An Archaeology of the Human Sciences* [New York: Pantheon Books, 1971]), who drew heavily on the much earlier work of Henri Daudin (*Cuvier et Lamarck: Les Classes Zoologiques et l'Idée de Série Animale 1790–1830* [Paris: F. Alcan, 1926]). Historians of science have never rested easy with Foucault's analysis, even if it did have the "merit of awakening historians from their dogmatic slumbers." See the rich work by James L. Larson, *Interpreting Nature: The Science of Living Form from Linnaeus to Kant* (Baltimore: Johns Hopkins University Press, 1994), p. 3.

[15]Harriet Ritvo, *The Platypus and the Mermaid, and Other Figments of the Classifying Imagination* (Cambridge, MA: Harvard University Press, 1997), p. 14.

[16]Ibid., p. 19.

is able to suggest that, as she puts it, "a great deal remained up for grabs" in the period:

> To participants in a project conventionally hailed as demonstrating the intellectual conquest of nature, the internal history of zoological classification might seem as much a constantly shifting kaleidoscope of competing systems and principles, as a steady evolution and collaboration of a dominant paradigm.[17]

Ritvo's discussion of broader public resistance to Linnaean classification certainly enriches our sense of the period, revealing that, to many literate Britons, the classificatory sciences looked less like philosophy rampant than philosophy rudderless. But she has still bigger fish to fry: it is her more ambitious assertion that the "membrane" between specialist and lay communities was, as she puts it, "highly permeable in both directions."[18] To support this argument she gathers evidence that certain significant categories of analysis—for instance "savage" and "domestic"—amounted to "taxonomic differentia smuggled into systematic zoology from a lay world of utilitarian and anthropocentric discrimination."[19] To the degree that she succeeds here, Ritvo's "bottom up" history of systematics does more than provide a nuanced cultural history of the classificatory sciences in pre-*Origin* Britain; it has the potential to shed valuable light on issues central to the content of the sciences of life in the nineteenth century—saliently, Darwin's ideas about hybridity and artificial selection.

Maurice v. Judd offers a remarkable opportunity to investigate, for the United States, problems like those taken up by Ritvo in Britain during the same period: the case presents a gloriously feisty public forum where competing parties deployed a wide range of skills, texts, and authorities in efforts to undermine (and sometimes to undergird) the edifice of contemporary taxonomy and classification. Nor are these different positions merely static: by following the citations marshaled by the diverse parties to the action I will show how knowledge of natural order and natural types "migrated" across different communities of expertise, and across geographical regions, thereby revealing how the "new philosophy" of the metropolitan (and largely French) classifying science made its way to American readers, and how such ambitious "systems" fared in confrontation with folk taxonomies, vernacular natural history, and biblical

[17] Ibid., p. 38.
[18] Ibid., p. 45.
[19] Ibid., p. 41.

representations of creation. These trial transcripts thus dramatize just how unstable the science of natural order was in 1818, at least as viewed from lower Manhattan by readers who had access to a preponderance of the leading publications in Anglo-European natural history; indeed, it was by setting these texts against each other that opponents of the "new philosophy" could represent the science of classification as a house woefully divided, and by no means the architecture of the natural world. Having revealed the contingency of such "systems," the skeptics were positioned to defend the legitimacy of the taxonomic discriminations implicit in ordinary language and in the social and political categories precipitated out of labor, law, and the market. The adversarial setting of the Mayor's Court dramatized these conflicts, and for historians of science and scholars of law generally interested in the relationship between legal systems and the production of knowledge, *Maurice v. Judd* is a minibonanza.[20] For anthropologists, historians, and scientists concerned to explore how human beings have "thought with animals" at different times and places, there is much here on which to graze.[21]

[20] A good point of departure here is Sheila Jasanoff, *Science at the Bar: Law, Science, and Technology in America* (Cambridge, MA: Harvard University Press, 1995). While Jasanoff is primarily concerned with the twentieth century, she shows convincingly how courtroom standards and practices pose serious challenges to the claims of scientific experts (adversarial trials can become, she suggests, "orgies of deconstruction" [p. 53], a phrase that captures something of what takes shape in *Maurice v. Judd*). Other relevant recent studies of law, medicine, and science include: Roger Smith and Brian Wynne, eds., *Expert Evidence: Interpreting Science in the Law* (London: Routledge, 1989); James C. Mohr, *Doctors and the Law: Medical Jurisprudence in Nineteenth-Century America* (Baltimore: Johns Hopkins University Press, 1993); David Delaney, *Law and Nature* (Cambridge: Cambridge University Press, 2003); and Tal Golan, *Laws of Men and Laws of Nature: The History of Scientific Expert Testimony in England and America* (Cambridge, MA: Harvard University Press, 2004). For additional discussion of this area (particularly the range of new studies on the "technologies of truth"), see the articles I assembled and introduced in the recent "Focus" section of *Isis*: Burnett et al., "Science and the Law," *Isis* 98, no. 2 (2007), pp. 310–350.

[21] An irreverent colleague refers to this field as the "new crittercism." For a useful introduction, see Lorraine Daston and Gregg Mitman, eds., *Thinking with Animals: New Perspectives on Anthropomorphism* (New York: Columbia University Press, 2004). Examples from this large literature would include: James C. Turner, *Reckoning with the Beast: Animals, Pain, and Humanity in the Victorian Mind* (Baltimore: Johns Hopkins University Press, 1980); Harriet Ritvo, *The Animal Estate: The English and Other Creatures in Victorian England* (Cambridge, MA: Harvard University Press, 1987); Donna Haraway, *Primate Visions* (London: Routledge, 1989); Roy G. Willis, ed., *Signifying Animals: Human Meaning in the Natural World* (London: Unwin Hyman, 1990); Angela N. H. Creager and William Chester Jordan, eds., *The Animal/Human Boundary: Historical Perspectives* (Rochester, NY: University of Rochester Press, 2002); and Mary Heninger-Voss, ed., *Animals in Human Histories: The Mirror of Nature and Culture* (Rochester, NY: University of Rochester Press, 2002). Historians of science have mined this vein with some success, writing studies of particular taxons and their place in the development of scientific ideas and practices. See, for instance: Robert E. Kohler, *Lords of the Fly: Drosophila Genetics*

Though whales were at issue—lumbering creatures in distant seas—their place in the world could not, in the end, be separated from charged ideas about human beings and the peculiarly solipsistic preoccupations of terrestrial featherless bipeds: as we will see, race, gender, and class were at stake, explicitly, when the citizens of New York had to legislate the order of nature. It is perhaps cliché to assert that all taxonomy is politics, or to insist that epistemological problems are always also problems of social order; *Maurice v. Judd* provides a striking occasion to test the viability (as well as the limits) of such sweeping claims.[22]

But were epistemological problems authentically at stake in the effort to construe an obscure New York State statute entitled, humbly, "an act authorizing the appointment of guagers [*sic*] and inspectors of fish oils"?[23] I will argue that they were. The "new philosophy" that exercised the adversaries in this trial represented a powerful (and novel) technique for ascertaining the relations among living creatures, a technique that was, in the second decade of the nineteenth century, codifying the gains of a rapid ascendancy, and institutionalizing its practices and its claims at the most visible center for natural history in the world, the Muséum National d'Histoire Naturelle in Paris. It was there, under the imperious hand of Georges Cuvier, that "comparative anatomy" had become the indispensable guide to natural order. Since this is, loosely, the "new philosophy" at issue in *Maurice v. Judd,* a brief review of the significance of this development in natural history is in order.

To set these significant changes in high relief, we might begin by recalling that so towering a figure in the world of natural history as Georges-Louis Leclerc, Comte de Buffon, could write in the mid-eighteenth century that anatomy was "a foreign object to natural history . . . or at least

and the Experimental Life (Chicago: University of Chicago Press, 1994); Daniel P. Todes, "Pavlov's Physiology Factory," *Isis* 88, no. 2 (1997), pp. 205–246; and Karen Rader, *Making Mice: Standardizing Animals for American Biomedical Research, 1900–1955* (Princeton: Princeton University Press, 2004).

[22] The classic statement of the sociological basis of classification remains: Emile Durkheim and Marcel Mauss, "De Quelques Formes Primitives de Classification," *Année Sociologique* 6 (1903), pp. 1–71. For an invaluable discussion of the critical reception of their argument (together with a spirited defense of its continued centrality to the history and philosophy of science), see David Bloor, "Durkheim and Mauss Revisited: Classification and the Sociology of Knowledge," *Studies in History and Philosophy of Science* 13, no. 4 (1982), pp. 267–297.

[23] See New York (State) Legislature, *Journal of the Assembly of the State of New-York: At Their 42nd Session* (Albany: J. Buel, 1819), p. 263.

not its principal object."[24] And while it is possible to point to a long tradition of animal dissection and anatomical study, such work was not understood, before Cuvier, to be *the* privileged basis for the sciences of classification.[25] On the contrary, as Thomas Henry Huxley quipped at the end of the nineteenth century (recalling the bad old days before comparative anatomy), "the pure systematic zoologist was unaware that the stuffed skins he named and arranged ever had contained anything but straw."[26] In other words, back then innards weren't part of the classifying game.

Debates among zoological practitioners of the classifying sciences in the eighteenth century never yielded perfect consensus on the proper way to access the "natural order" of the animal world (nor indeed were all of them persuaded such a thing was accessible to mere mortals), but the prestige, scale, and greater sophistication of botanical investigation in the period—and, above all, the success of Linnaeus's sexual system for plant taxonomy—tended to draw attention to discrete and visible *external* characteristics of creatures, preferably characteristics that differed neatly by number, kind, or combinatorial logic. Hence, for instance, the particular suitability of the pistils and stamens of the flowering plants. Where animals were concerned, the equivalent might be numbers of feet or teeth (though such discriminants ordered the beasts much less tidily than the sexual system managed the vegetable kingdom). To be sure, there were many who were acutely aware of the shortcomings of such "artificial" systems, and who dilated on the human, limited, and finally

[24] See Scott Atran, *Cognitive Foundations of Natural History: Towards an Anthropology of Science* (Cambridge: Cambridge University Press, 1990), p. 202.

[25] For a somewhat dated chronicle-style early history of comparative anatomy pre-Cuvier, see F. J. Cole, *A History of Comparative Anatomy from Aristotle to the Eighteenth Century* (London: MacMillan, 1944). A considerable number of more recent specialized studies are available for the late eighteenth and early nineteenth centuries, including: Richard W. Burkhardt Jr., *The Spirit of System: Lamarck and Evolutionary Biology* (Cambridge, MA: Harvard University Press, 1977); Larson, *Interpreting Nature;* and Toby Appel, *The Cuvier-Geoffroy Debate: French Biology in the Decades before Darwin* (New York: Oxford University Press, 1987). For the later nineteenth century, see: Mary P. Winsor, *Reading the Shape of Nature: Comparative Zoology at the Agassiz Museum* (Chicago: University of Chicago Press, 1991); and idem, *Starfish, Jellyfish, and the Order of Life: Issues in Nineteenth-Century Science* (New Haven: Yale University Press, 1976). As Winsor herself points out (*Reading the Shape of Nature,* p. xii), the history of systematics is still largely unknown.

[26] The joke, attributed to Edward Forbes, turns up in Huxley's essay "Owen's Position in the History of Anatomical Science," which appears as an appendix to the second volume of: Richard Owen, *The Life of Richard Owen* (London: Murray, 1895). NB: The stereotype tells us as much (if not more) about how the comparative anatomists disparaged their forebears as it does about natural history in the eighteenth century.

merely *convenient* character of these approaches, which clearly failed to cut the world at its joints. But cutting the world at its secret joints, rather than on its manifest dotted lines, was no easy matter, and advocates of more ambitious "natural" systems confronted the daunting task of taking everything into account in each case, or of offering a defensible rationale for electing a particular array of prioritized considerations.

The "joints" of the world were, after all, hidden under the skin of things, and it was by codifying and promulgating a particular method for accessing such internal characteristics that Cuvier achieved his renown as the nineteenth century's leading practitioner of the science of classification. As Daudin puts it in the classic study of the question:

> The resort to dissection, and the complete examination of internal organization—already practiced before Cuvier, but which he did more than anyone else to make into the fundamental and constitutive method of general zoology—would seem to have been the technical factor that gave rise to decisive progress in the properly scientific formulation of zoological groupings.[27]

Cuvier's push into the internal configurations of living creatures precipitated a veritable revolution in the practice of classification.[28] By privileging internal organization Cuvier came to identify a small set of separate "plans" upon which animals appeared to be built; such plans constituted, for him (and for many who followed the multiple volumes of his *Leçons d'Anatomie Comparée* and his synthetic *Règne Animal*), the

[27] Daudin, *Cuvier et Lamarck,* p. iv.

[28] Though close study of this development reveals that it was slower and in many ways more conservative than the secondary literature sometimes suggests. For instance, in their important 1795 revision of the mammals, Cuvier and Geoffroy proposed a threefold division of the class according to the arrangement (and covering) of the appendages (the "mammifères marins" were the first of these three divisions). The rationale for this move did lie in the extent to which these organs of apprehension and sensation were bound up with the whole "lifestyle" (and thus inner anatomy) of the animal, but the authors were aware that their chosen "indicatory character" was not so very far from the old business of counting feet. Indeed, they were at pains to state that attention to hooves and fingernails did not mean they were just reaffirming the old category of the "quadrupeds": "These different degrees of perfection [in the animal world] depend above all on the division more or less pronounced of the fingers, and on their coverings of greater or lesser delicacy. *But be advised that I am not talking about their number;* the number of these parts offers to natural history a characteristic of very little value" (emphasis added). But the very firmness of this protest underscores the proximity of their view to the received wisdom they sought to supersede. It was, at base, a conservative revolution, in keeping, in many ways, with Cuvier's general character. See Etienne Geoffroy and Georges Cuvier, "Mammalogie," *Magasin Encyclopédique* 2 (1795), pp. 152–190, at p. 172. On Cuvier more generally, see Dorinda Outram, *Georges Cuvier: Vocation, Science, and Authority in Post-Revolutionary France* (Manchester: Manchester University Press, 1984).

primary divisions, or *embranchements,* of the animal kingdom; a hierarchy of organ systems determined subsequent groupings. The significance of Cuvier's gambit looms large: the manifest similarities of behavior, habitat, color, voice, taste, size, or external form were, in principle, rendered irrelevant when confronting the problem of organic affinity; what mattered most was, quite possibly, invisible, at least at first glance. A number of scholars have seen the shift in nothing less than world-historical terms. Take Scott Atran, for instance, who goes so far as to assert, concerning Cuvier's forsaking of the ordinary phenomenal domain, that "[p]erhaps for the first time in the history of thought, appearance would no longer constrain the nature of being."[29] Even dismissing this as hyperbole (transubstantiation comes to mind as one of a number of prior claimants to what is, after all, a dubious distinction), the centrality of the comparative anatomical method to nineteenth-century taxonomy—and to the emerging science of "life itself," *biology*—cannot be denied.[30]

Nowhere were the effects of this approach more closely watched in the late eighteenth and early nineteenth centuries than in the shaping of the zoological class into which human beings appeared to fit, that of the *mammifers,* or mammals. And it is worth recalling that the codification of this class hinged on a relatively small number of "problematic cases," of which the cetaceans were probably the most dramatic and, as we shall see, troublesome. Indeed, the shifting of the whales, dolphins, and porpoises from the category of "Pisces" to the class *Mammalia* can be construed as a decisive (and profoundly counterintuitive, when seen in context) move in the bid to make deep anatomy, rather than any constellation of manifest phenomenal characteristics, the dispositive factor in the ordering of nature. Nineteenth-century scientists seized on the point: the distinguished zoologist Sir William Henry Flower, writing in 1900, asserted that a consideration of whales "leads to great generalizations and throws light on far-reaching philosophical speculations," exactly because it taught that "in the endeavor to discover what a creature really is . . . and to what it is related, the general outward appearance affords little clue, and we must go deep below the surface to find out the

[29] Atran, *Cognitive Foundations of Natural History,* p. 210.

[30] For an excellent brief overview of these issues, see Paul Farber, *Finding Order in Nature: The Naturalist Tradition from Linnaeus to E. O. Wilson* (Baltimore: Johns Hopkins University Press, 2000). In his recent work on science in early nineteenth-century France, Charles Gillispie has situated the developments in comparative anatomy with respect to the broader trends toward positivism in the period. See Charles Coulston Gillispie, *Science and Polity in France: The Revolutionary and Napoleonic Years* (Princeton: Princeton University Press, 2004), especially chapters 3 and 9.

essential characteristics of its nature."[31] Historians of science have not overlooked the historical significance of this same issue. As Atran notes: "when bats were definitively dropped from the birds, and whales from the fish, so that both could be joined to the mammals, a very profound, even revolutionary, event in systematics thus occurred."[32] As we will see, the disputants in *Maurice v. Judd* understood the connections and sensed the gravity: the implications of a system that put bats and whales together in the same category with a young (White) woman with a baby at her breast—that essential feature of the *mammifers*—received probing and nervous scrutiny in the court.[33]

Just how did "whales" cease to be "fish"? When did this happen? What was at stake? Answering these questions in the case of *James Maurice v. Samuel Judd*—and beyond it—will demand that we consider not merely the cultural ramifications of the science of life in the late eighteenth and early nineteenth centuries, but the emerging structures of that science itself. To begin, let us turn to New York City in 1818.

From Dock to Docket

For all the cetological wranglings of *Maurice v. Judd,* the word "whale" appears nowhere in the original pleadings for the case, which were entered in the manuscript register of the New York Court of Common Pleas on the third Monday of October, 1818.[34] What we find instead is

[31] See William Henry Flower, "Whale," *Encyclopedia Britannica,* 11th edition (Cambridge: Cambridge University Press, 1910–1911), vol. 28, p. 570. The article was written a decade earlier, and appeared in at least one previous edition of *Britannica.*

[32] Atran, *Cognitive Foundations of Natural History,* p. 268.

[33] We now generally hear the word "mammal" without thinking of breasts, but this was by no means the case in the late eighteenth century, when the new category could seem a barbarous (or even perverted) innovation. For an account of the place of gender in the adoption of the term, see "Why Mammals Are Called Mammals," chapter 2 of Londa Schiebinger's *Nature's Body: Gender in the Making of Modern Science* (Boston: Beacon, 1993).

[34] To make a complicated case still harder to trace, the scribe unfortunately recorded the wrong year (1819) in the docket ledger. I would like to thank Bruce Abrams of the Old Records Room of the County Clerk Archives at the New York Supreme Court for helping me secure the pleadings, the minutes, and the jury roll for *Maurice v. Judd.* A general note on the sources for this study: Valuable as the manuscript court records are for confirming the administrative contours of *Maurice v. Judd,* this trial took place in an unfortunate hiatus between the more extensive eighteenth-century court minutes discussed by Richard B. Morris in his *Select Cases of the Mayor's Court of New York City 1674–1784* (Washington, DC: American Historical Association, 1935) and the formalization of court recording, which did not take place until after the judicial reforms in the New York courts in the 1820s. This means that the official court records for the case are sparse on the testimony of witnesses and the proceedings of the case itself (no verbatim transcript of the case appears in either *The New-York City-Hall Recorder* or *The New-*

the trace of a minor commercial transaction that ran afoul of a zealous civil servant:

> James Maurice, plaintiff in this suit, complains of Samuel Judd, defendant in this suit, in custody, &c. of a plea, that he render to the said plaintiff the sum of seventy-five dollars, lawful money of the State of New-York, which to him he owes and from him unjustly detains. For . . . the said defendant, heretofore, to wit, on the first day of July, in the year of our Lord 1818, at the city, and in the county of New-York, and after the 31st day of March, 1818, did buy of one John W. Russell, in the city of New York, three casks of fish oil; the said three casks of fish oil, at the time of the said purchase by the same defendant, not having been gauged, inspected and branded, according to law, contrary to the form of the statue in such a case . . .

Since the statute provided for a fine of twenty-five dollars per uninspected cask, James Maurice, the appointed "inspector of fish oils" in the city of New York, intended to recover from Samuel Judd, proprietor of the New-York Spermaceti Oil & Candle Factory at 52 Broadway (and

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York Judicial Repository). For this reason, we are obliged to rely in many places on Sampson's published transcript (*IWF*). While this is less than ideal, given his active role in the case, it is less problematic than one might initially think. The text does evidence some suspiciously neat details (favorable to the plaintiff's case), which I will discuss where they are relevant, and there can be little doubt that Sampson gives himself many of the best lines in the case. Even so, it is worth remembering that Sampson was a very active member of a small coterie of early court-affiliated shorthanders and stenographers: he was involved with the publication of a pamphlet that dealt indirectly with shorthand itself (Samuel Woodworth, *Beasts at Law, or, Zoologian Jurisprudence* [New York: J. Harmer and Co., 1811]); and he was immortalized in the first monograph essay in an improbably titled series known as the "Little Visits to the Homes of Eminent Stenographers" (i.e., Charles Currier Beale, *William Sampson, Lawyer and Stenographer* [Boston: n.p., 1907]). He was responsible for more than a dozen published trial records, and there is no evidence I know of that points to any of the participants in these trials challenging his versions of events. Given that a number of those trials, like *Maurice v. Judd,* involved leading civic figures, it seems unlikely that, were his transcripts unacceptable versions of events, no such animadversions would survive, particularly in view of the historical scrutiny which several of his legal exploits have drawn. See: "William Sampson and the Codification Movement," chapter 3 of Maxwell Bloomfield's *American Lawyers in a Changing Society, 1776–1876* (Cambridge, MA: Harvard University Press, 1976); and Walter J. Walsh, "Redefining Radicalism: A Historical Perspective," *George Washington Law Review* 56 (1991), pp. 636–682. Manuscript letters from Sampson in the Carey Papers at the Historical Society of Pennsylvania shed some light on Sampson's financial and professional strategies as a legal author and pamphleteer. Coarsely summarized, they indicate that the business never made him rich. Finally, where *Maurice v. Judd* is concerned, it is worth noting that Sampson identifies the recorder who kept the minutes from which the published transcript of the trial was composed (he was Joseph D. Fay, a lawyer whose name is associated with a number of formally published trial transcripts from the

purveyor of "Spermaceti, wax and tallow mould candles," "winter pressed and summer strained spermaceti and olive oil," as well as an array of lamps, wicks, and lampglasses, at his stand on the old Fly Market), the sum of seventy-five dollars.[35]

Although Judd counter-pled that he "does not owe the said sum of seventy-five dollars," he never contested the assertion that he had purchased casks of spermaceti from Russell that did not bear Mr. Maurice's seal. What Judd contested was that those particular casks demanded Mr. Maurice's statutory attentions (attentions for which, after all, Judd himself was obliged to pay).[36]

At issue was the act passed by the New York State Legislature at Albany on the 31st of March 1818, which stated in relevant part:

> That it shall be the duty of each person appointed by virtue of this act, to provide himself with proper instruments for gauging and inspecting oil, and whenever called on to gauge and inspect any parcel of fish oil, within the place for which he was appointed, it shall also be his duty to inquire diligently, and seek out any parcels of fish oil within his district, and gauge and inspect the same, and brand legibly on the head of each cask he may so gauge and inspect, his own name and the name of the place for which he was appointed; also the whole number of gallons the same shall gauge, and separately from each other the quantity of water, the quantity of sediment, as well as the quantity of pure oil he shall find therein, and shall make, subscribe, and deliver to the owner or holder of such parcel of oil so gauged and inspected, a certificate, exhibiting in separate columns the quantity of each of the aforesaid enumerated ingredients the whole parcel shall contain; for all of which gauging, inspecting, branding, and certifying aforesaid, he shall receive from the

period), and that Sampson thanks several of his other colleagues for sharing with him their notes, to aid in his reconstruction of the "fair and full statement of all that was said or acted on this memorable case" (*IWF,* p. vi). For further discussion of trial transcripts in this period, see: Michael Jonathan Millender, "The Transformation of the American Criminal Trial, 1790–1875," Ph.D. dissertation, Princeton University, 1996, chapter 1; and Robert A. Ferguson, *Law and Letters in American Culture* (Cambridge, MA: Harvard University Press, 1984), chapter 3.

[35] See advertisement in *Evening Post* for Saturday, 12 September 1818. NB: There was in fact some question as to whether Maurice was actually the commissioned inspector. It would appear that he was not able to show his commission papers. This technical ploy by the defense was rejected by the judge, and did not affect the verdict.

[36] While merchants were required to pay the inspection fee, they were permitted to pass on a portion of this expense to buyers in the form of a slightly elevated price on retail sales.

owner or holder of the oil so gauged and inspected, twenty cents for each cask, be the same small or large. . . [37]

From the start of the trial itself (on the 30th of December of the same year), the plaintiff's lead lawyer, John Anthon—who along with Sampson, represented the inspector, Maurice—worked to keep the trial on the narrow issue of commercial regulation, and away from the muddy matters of taxonomy: "In a well-ordered community," Anthon announced in his opening remarks, "where an attempt to deviate from the plain path of honest dealing is detected, the legislature interferes, and restrains such wanderings by penal statutes."[38] Because there had been active complaints about the fish oils sold in New York State, the Albany legislature had drafted the act for the inspection of fish oils. And since Judd had manifestly broken that law (by having in his possession uninspected oil), and Maurice had caught him, the case should be an easy one: "The facts in this cause," Anthon asserted, "are comprised in a very narrow compass."

Good to his word, Anthon attempted in the first instance to rest the plaintiff's case after calling only a single witness to the original transaction. Had the casks been conveyed? In New York? After March of 1818? Without marks of inspection? Having established these points to their satisfaction, Maurice's lawyers proposed to rest their case and await the defense. But Judd's attorneys—General Robert Bogardus and William M. Price—replied with a high-stakes gamble, declaring that if this was the totality of the plaintiff's case, then the defense would not call a single witness, and would instead move for a non-suit, alleging that the central question (Was the oil in question *fish* oil?) had not been touched. A *tête-à-tête* at the bench ensued, and Anthon capitulated, agreeing to expand the plaintiff's case to the taxonomic questions—though not without a certain disgust, since, as he put it, he had "supposed it understood that the question was to be tried fully upon its merits, and not like a game of brag."[39]

The comment suggests Anthon knew full well that the floodgates had been opened. His bid to hold the looming classificatory issue at bay had failed: whether "spermaceti oil" was "fish oil"—and thus the vexatious question of whether a whale was a fish—all this was now on the table; and it was to these determinative questions that the next two days, and nearly twenty witnesses, would be addressed. Not only would those

[37] *IWF,* p. 10.
[38] Ibid., p. 2.
[39] Ibid., p. 15.

witnesses leave in the hands of the jury conflicting answers, they would also offer conflicting accounts of who was best positioned to offer answers with authority. As Sampson pointedly put it to Mitchill on the stand later that day: "Doctor, you have mentioned three classes of men, fishermen, artizans, and men of science. There is a much larger class, those who neither fish, manufacture, nor philosophize; have you ever thought it worth while to pay attention to their opinion?"[40]

To tease out the many strands of argument braided into the transcript of *Maurice v. Judd,* I propose to use these four helpful "actor's categories" referenced at this moment in the testimony, and to revisit the central issue of the trial from each of these distinctive perspectives. Was a whale a fish? To make sense of this question we must do as the court did in late December of 1818—we must ask around, consulting those who had a claim to know: those who "philosophize" (the naturalists); those who "fish" (sailors and whalemen); those who "manufacture" (artisans, jobber-merchants, and dealers in whale products like oil and candles); and, finally, as Sampson would have it, that "much larger class" consisting of everyone else. Let us begin with this last group—the most general, "default," category of ordinary English-speaking New Yorkers who had no direct stake in whales or their commercial derivatives. Many of them were in attendance.

[40] Ibid., p. 26.