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## “The testimony of my own eyes” The Strange Case of the Mammal with a Beak\*

Martin Kemp<sup>†</sup>

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There has always been a significant element of trust when we look at an image of something we have not seen, above all when it looks naturalistic and convincing. Illustrators often employ naturalistic tricks in the service of the “rhetoric of reality.” The case study is the Australian Duck-Billed Platypus, which stretched credibility when it was first discovered, resembling an artificially confected monster. The first scientific account, by George Shaw in *The Naturalist’s Miscellany* in 1799, is a masterpiece of wonder and scepticism in which he finally convinces himself and us of the reality of the strange beast. However, how many of us have seen a real one?

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How many of us have seen a Duck-Billed Platypus (*Ornithorhynchus anatinus*)? I suspect that most of us have not seen one. I haven’t, although I have been to Australia. How many of us think that it does not exist? I have asked this question in lectures, and no-one has been prepared to doubt its existence. Does this place us in a superior position to someone in the sixteenth century who was convinced of the reality of unicorns? There was a long textual tradition of the one-horned “horse” or “goat,” accompanied by increasing numbers of convincing depictions, and its horn (actually the tusk of the narwhale) was of course known and much prized. For the platypus we may cite “reliable” books and journals with photographs and various moving images of the living animal. Our biology teacher may have told us about it. Perhaps we know someone who has seen one. We certainly have a massive aggregation of what we take to be

\* Received 23 May 2012.

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trustworthy testimony about the platypus, but the principle of believing what we have *not* seen is essentially the same as the trust that a sixteenth-century reader placed in Conrad Gesner's great volumes of animals, which illustrate a sprightly unicorn (Gesner 1551-1587, I).<sup>1</sup> It should be said that Gesner placed a good deal of emphasis on the quality of his sources and knew that those for the unicorn were less trustworthy than the available accounts of the rhinoceros (which he illustrated via Dürer's famous and compelling woodcut of the armour-plated beast).

Most of our knowledge, whether we are a research scientist, a bricklayer, or a politician, comes to us via sources we trust. We simply cannot check every item of knowledge that is transmitted to us—for obvious practical reasons. We trust some received knowledge more confidently than others, on the basis of various criteria. The foremost of these is our judgment about the authority of the source. This criterion has always provided the ground base for all branches of knowledge, including history and the sciences. Today, evaluating a source's authority is as urgently relevant as it ever has been, given the proliferation of rubbish on the internet, but there is little enough education on how to critically evaluate websites that present material with apparent authority and conviction.

Perhaps the next most important criterion is the consistency of the knowledge with a belief system in which large amounts of wisdom all lock together to reinforce each other. There are also more personal factors, like personally knowing someone who testifies vehemently to the truth of something. Convincing visuals play a major role. If an illustration breathes an air of apparent naturalism, especially if it looks as if it is the product of photography, we are predisposed to suspend any disbelief that we might have harbored. The collective visual qualities that serve to inculcate trust are what I call the "rhetoric of reality" (Kemp 2010). Arrays of authoritative charts, graphs, and tables of data serve to create a matching "rhetoric of irrefutable precision."

Ideally of course we should strive to be our own eye-witness and check all data on those occasions where it is both possible and of high priority. This is the aspiration of the scientist who sets up an experiment or the historian who checks a document. We expect that the nature of the resulting account verbally and visually will deploy communicative means that convey the eye-witness quality of the author's experience. These rhetorics have evolved over time. In the past a scientist might have said "I have seen this many times..." Now we are told more drily that "it has been observed that..." This is not to say, however, that we can trust either what a highly responsible witness tells us or what we see on our account.

<sup>1</sup> Found under "De Monocerote." For the issue of trust more generally, see M. Kemp, Taking it on Trust: Form and Meaning in Naturalistic Representation *Archives of Natural History* 17 (1990): 127-88.

This lesson was taught to me by an outstanding biology teacher, Dennis Clarke, at Windsor Grammar School. We had dissected various animals. Next came rats, a much-favored animal for experiments. During the course of our cutting and probing as tyros of dissection, he asked us to find the rat’s gallbladder. After a decent interval he enquired about our success. A cluster of hands were raised, mine included. “That’s a strange thing,” he said, “rats don’t have a gallbladder.” The moral is that we strive (and often succeed) to find what we are looking for even when it is not there.

All these various factors behind witnessing and trust come into vivid play in the first published account of that most improbable mammal with a beak. Its first describer, George Shaw, bears witness not just to the platypus but to every aspect of the actual process of witnessing that experts conduct on our behalf. Shaw, educated in medicine at Oxford, was Assistant Keeper at the Natural History Museum in London when he published his account of the platypus in volume 10 of the *Naturalist’s Miscellany* in 1799, and subsequently in the first volume of his *General Zoology. Or, Systematic Natural History* in 1800. Shaw’s account provides a splendidly transparent demonstration of the strategies that a judicious eye-witness account increasingly needed to deploy to be taken seriously in Britain and in the international community of empirically-minded scientists around 1800.

What Shaw knew was the complete skin of a platypus. It has often been assumed that his specimen was that sent to Britain by the keen naturalist Captain John Hunter, Governor of New South Wales, and associate of Joseph Banks (Auchmuty, 1966). Whatever Hunter’s rather unhappy travails as governor of what was still in part a penal colony, he was in the eyes of naturalists well established as a serious witness of Australia’s strange fauna. Hunter made his own rather disproportioned drawing of a platypus, published in 1802 in the second edition of David Collins’s *An Account of the English Colony in New South Wales*, as “an amphibious animal of the mole kind.” Hunter had sent his first specimen to the Newcastle Literary and Philosophical Society, one of the substantial regional organizations devoted to the frontiers of science, technology, and humane learning. He was an honorary member of the Newcastle Lit & Phil and also sent them a pickled wombat (Piggot and Jessup 2007).<sup>2</sup> The wombat has survived in the Hancock Museum, but their platypus has disappeared.

The example known to Shaw was not that sent to the Lit & Phil, which was to be drawn and printed by Thomas Bewick, but came from a less reliable source (van der Lande 2007). It was brought to England by an unnamed naval officer in October 1798, who had acquired it along with some other specimens from

<sup>2</sup> See also, J. Banks, E. Slater and J. Hunter, Letters, *Literary and Philosophical Society of Newcastle Upon Tyne* (Newcastle, 1799?).

another officer, who in turn had obtained it from a "serjeant." Shaw himself did not outline this shaky provenance. It was no doubt with some relief that he was able to record in the amplified account he produced for his *General Zoology* that two further specimens had been "very lately sent over from New Holland [Australia] by Governor Hunter, to Sir Joseph Banks" (Shaw 1799, n.p.). The pedigree of specimens was important. Other platypuses had seemingly arrived in Britain before the one described by Shaw, but they did not have better pedigrees than the many confected monsters that arrived from exotic places. They did not seemingly warrant serious attention. Although Shaw does not inform us of the uncertain origins of his specimen, he goes on to tell us reassuringly that the skin he inspected is in the safe hands of "Mr. Dobson, so much distinguished by his exquisite manner of preparing specimens of vegetable anatomy" (Shaw 1799, n.p.).

Shaw prudently "entertained suspicions" when confronted with the first specimen. He was well aware that there had been a centuries-old trade in skillfully assembled prodigies of nature, including a lively market for dead mermaids that supplemented the income of enterprising Chinese fishermen. For a serious witness to be duped by a forgery would seriously undermine the status he had carefully constructed for himself. His first account conveys his tempered excitement at the new discovery:

Of all the Mammalia yet known it seems the most extraordinary in its confirmation; exhibiting the perfect resemblance of the beak of a Duck engrafted on the head of a quadraped. So accurate in the similitude that, at first view, it naturally exhibits the idea of some deceptive preparation by artificial means: the very epidermis, proportion, serratures, manner of opening, and other particulars of the beak of a shoveler, or other broad-billed species of duck, presenting themselves to the view: nor is it without the most minute and rigid examination that we can persuade ourselves of its being the real beak or snout of a quadraped.... A degree of sceptism is not only pardonable, but laudable; and I ought perhaps to acknowledge that I almost doubt the testimony of my own eyes with respect to the structure of this animal's beak; yet must confess that I can perceive no appearance of any deceptive preparation; ...nor can the most accurate examination of expert anatomists discover any deception in this particular. (Shaw 1799, n.p.)

Shaw's detailed account is a masterly piece of sober and measured description. I am giving excerpts here:

The body is depressed, and has some resemblance to that of an Otter in miniature: it is covered with a very thick, soft, and

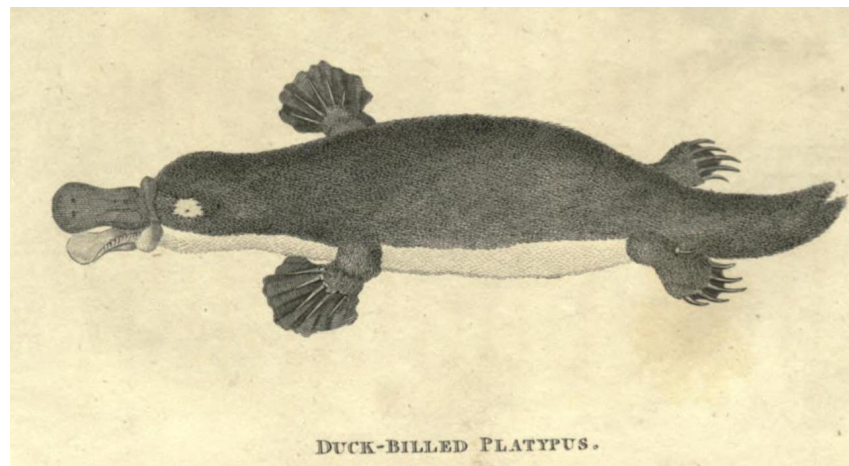
beaver-like fur, and is of a moderately dark brown above, and of a subferuginous white beneath...The mouth or snout, as before observed, so exactly resembles that of some broad-billed species of duck that it might be mistaken for such: round the base is a flat, circular membrane, somewhat deeper or wider below than above; viz. below near the fifth of an inch, and above about an eighth. The tail is ... is about three inches in length: its color is similar to that of the body. The length of the whole animal from the tip of the beak to that of the tail is thirteen inches: of the beak an inch and half. The legs are very short, terminating in a broad web, which on the fore-feet extends to a considerable distance beyond the claws; but on the hind-feet reaches no farther than the roots of the claws. ... The internal edges of the under mandible, (which is narrower than the upper) are serrated or channelled with numerous striae, as in a duck's bill. The nostrils are small and round, and are situated about a quarter of an inch from the tip of the bill, and are about the eighth of an inch distant from each other.... The ears are auditory foramina are placed about half an inch beyond the eyes:...the eyes, or at least the parts allotted to the animal for some kind of vision... are probably like those of Moles, and some other animals of that tribe; or perhaps even more subcutaneous; the whole apparent diameter of the cavity in which they were placed not exceeding the tenth of an inch. (Shaw 1799, n.p.)

The description is then dedicated to a nice piece of analysis that intuits the habits of the animal: “When we consider the general form of this animal, and particularly its bill and webbed feet, we shall readily perceive that it must be a resident in watery situations; that it has the habits of digging or burrowing in the banks of rivers, or under ground; and that its food consists of aquatic plants and animals” (Shaw 1799, n.p.).

The descriptive language used by Shaw, most notably the biological terminology that would be recognized by his professional colleagues, while somewhat obscure to lay people, and the evidence of very careful measurements, are crucial to the “rhetoric of reality” deployed by Shaw.

Illustrations lay at the very center of this strategy. He provided a good reconstruction of the appearance of the complete animal (Figure 1), together with plates of the feet and snout of the Platypus as separate “specimens” to enhance our ability to undertake a detailed and objective scrutiny of the strange creature. Indeed the full title of the periodical (which he had himself initiated) was the *Naturalist's Miscellany: or Coloured figures of Natural Objects Drawn and Described Immediately from Nature*. The plates produced for the *Miscellany* by Frederick Nodder, who was one of those entrusted with the illustrations in Banks's great botanical project, the *Florilegium*, lay

at the heart of the enterprise, since a good picture encourages us to become surrogate eye-witnesses. The veridical naturalism to which the growing band of British professional illustrators aspired had earlier been expressed in its most doctrinaire form by the anatomical illustrations commissioned by William and John Hunter.<sup>3</sup>



**Figure 1.** Frederick Nodder. “Duck-Billed Platypus,” In George Shaw’s *Naturalist’s Miscellany* (1799, 10).

The other major string in Shaw’s set of strategic bows was the Linnaean system of classification, which was by then more or less *de rigeur* for a serious zoologist or botanist. Assigning a new organism a binomial handle and a place in the great scientific system of nature was crucial. Shaw named it the *Platypus anatinus* (“Flat-foot, bird-snouted”)—now designated as the *Ornithorhynchus anatinus*—and assigned it to its due place: “The animal exhibited on the present plate constitutes a new and singular genus, which, in the Linnæan arrangement of Quadrapeds, should be placed in the order *Bruta*, and should stand next to the genus *Myrmecophaga* [the Anteaters]” (Shaw 1799, n.p.).

It is in the nature of such discoveries that unanimous acceptance is never forthcoming, not least in the rival worlds of other authorities on animals. Forgery is suspected. Something similar happens with the attribution of newly discovered works to major artists. However, in this instance, further specimens, dissections, and illustrations quite rapidly transferred the Platypus from the realm of unicorns and mermaids into the territories of trust upon which

<sup>3</sup> For the Hunter style, see M. Kemp, “The Mark of Truth”: Looking and Learning in some Anatomical Illustrations from the Renaissance and the Eighteenth Century, In *Medicine and the Five Senses*, ed. W. Bynum and R. Porter, (Cambridge, Cambridge University Press, 1993: 85-121). For a rather different view that attributes empirical representation only to post-1800 science, see L. Datson and P. Gallison, *Objectivity*, (Cambridge, MA: MIT Press, 2007).

naturalistic representation and description depend.<sup>4</sup> However, it remains a wondrous beast. For Shaw it verified "in a most striking manner the observation of Buffon; viz. that whatever was possible for Nature to produce has actually been produced" (Shaw 1799, n.p.). And in the bizarre world of internet fringe science it can serve the purposes of those who argue that life on earth is a manifestation of alien interventions (Spencer 2011). Although to most of us the central findings of modern biology are as plain as the nose on one's face, there is no saying to what ends visual knowledge produced by sober witnesses might be devoted by those who do not consent to our bodies of shared assumptions.

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<sup>4</sup> For the broader contexts for the acceptance of the platypus, see B. Hall, The Pradoxical Platypus. *Bioscience* 49 (1999): 211-18; and P. Olsen *Upside Down World. Early European Impressions of Australia's Curious Animals*, (Camberra: National Library, 2010: 14-21).