

# REFLECTIONS

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## ROC OF AGES

It was only a coincidence, I suppose, that last Tuesday was Big Bird day around here. For some time now I had been reading Marco Polo's account of his long sojourn in China and surrounding territories in the thirteenth century. I was deep into the second volume, in which Marco provides an account of the island of Madagascar, a place which he did not himself visit during the course of his extraordinarily far-ranging travels, when I came upon this:

"Tis said that in those other islands to the south, which the ships are unable to visit because this strong current prevents their return, is found the bird *Gryphon*, which appears there at certain seasons. The description given of it is however entirely different from what our stories and pictures make it. For persons who had been there and had seen it told Messer Marco Polo that it was for all the world like an eagle, but one indeed of enormous size: so big in fact that its wings covered an extent of 30 paces, and its quills were 12 paces long. And it is so strong that it will seize an elephant in its talons and carry him high into the air, and drop him so that he is smashed to pieces; having killed him the bird gryphon swoops down on him and eats him at leisure. The people of those isles call the bird *Ruc*, and it has no other name." He goes on to say that Kublai Khan, the Emperor of China, who had made him a member of his court and had sent him hither and thither as an ambassador to foreign lands, was greatly interested in this tale, and somehow, Marco tells us, had obtained one of its feathers, "which was stated to measure 90 spans, while the quill part was two palms in circumference."

So—though he is careful to report it as hearsay—Marco tells us of the *ruc*, a bird known under various other names—*roc*, *ruk*, etc.—derived from Persian. I had long ago encountered this great bird in *The Arabian Nights* in the second voyage of Sinbad, where that intrepid mariner tells of being shipwrecked on a beautiful island where he discovers a smooth white dome, fifty paces in circumference and too high for him to climb. Then the sky grows dark, as though a cloud had covered the sun, but it is no cloud at all: "I saw that it was a bird, of enormous size, bulky body, and wide wings, flying in the air, and this it was that concealed the body of the sun, and veiled it from view upon the island. At this my wonder increased, and I remembered a story which travelers and voyagers had told me long before, that there is in certain of the islands, a bird of enormous size, called the *ruk*, that feedeth its young with elephants. I was convinced, therefore, that the dome which I had seen was one of the eggs of the *ruk*." And, tying himself to one of the bird's legs with his unwound turban, he lets the great bird fly him to the mainland and returns to civilization.

And then that same day I happened to be browsing through *The Silmarillion*, J.R.R. Tolkien's highly miscellaneous compendium of material supplementary to his *Lord of the Rings* trilogy, and found this:

"There flew down from the high airs Thorondon, King of Eagles, mightiest of all birds that have ever been, whose outstretched wings spanned thirty fathoms; and staying Fingon's hand he took him up, and bore him to the face of the rock where Maedhros hung. . . ."

And so forth. Thorondon and other helpful eagles, the Great Eagles of the Misty Mountains, who speak the tongues of men and elves, show up again and again in the trilogy, performing mighty deeds, rescuing such people as Gandalf and Frodo from various perils, fighting off dragons in the Great Battle, and much more. Were the Great

Eagles Tolkien's version of the roc? He was always cagy about his source material (he always denied that he had been influenced by Richard Wagner, who had written four conspicuous operas about a Ring that Rules Them All that caused great mischief among gods and men before it finally was tossed back into the Rhine, from whence it had come). But he must have drawn his trilogy's imagery from far and wide, and, whether or not he had read Marco Polo, surely he knew of the adventures of Sinbad, in which, it seems highly likely, his giant eagles had had their origin.

Many other reports of huge birds can be found, going back at least 2500 years to the Greek historian Herodotus, who wrote of hearing from Egyptian priests of a race of great birds "beyond the sources of the Nile," strong enough to carry men off in their claws. It turns up in ancient Persian mythology, too, as the Simurgh, the "all-knowing bird of ages." Rabbi Benjamin of Tudela, who traveled through much of the Near East in the twelfth century, heard that when ships bound for China were in danger of sinking in stormy seas, the sailors would sew themselves up in hides and cast themselves into the water, where they would be seized and carried ashore by giant eagles. And the fourteenth-century Moroccan traveler Ibn Battuta, who traversed Arabia, Persia, India, China, and many another distant land in two decades of journeying and left a lengthy account of his experiences that is a diverting mixture of fact and fantasy, reported seeing, in the sea somewhere between China and Indonesia, a mountain some twenty miles away. "The sailors were amazed and said, 'We are not near land and there is no knowledge of a mountain in the sea. If the wind drives us onto it we shall perish'. . . The wind became somewhat calmer and at sunrise we saw that mountain had risen into the air and there was light between it and the sea. We were amazed at this and I saw the sailors weeping and saying good-bye to each other. I said, 'What is the matter?' They said: 'It is the *rukhh*. If it sees us we shall perish.' Then God Most High gave us the blessing of a favorable wind which took us directly away from it. . . ."

Of course there are no gigantic birds capable of flying around with elephants dangling from their talons, nor have there ever been. Tolkien's giant eagles are fantasy. Sinbad's great bird is a fable. Marco Polo's *ruk* is hearsay, as even he admits. Ibn Battuta's mountainous avian may have been an optical illusion.

But many fantasies and fables have roots in genuine archetypes, and the mighty roc can be traced to a real bird of immense size. Not one that flew around clutching elephants, because it was a sort of supersized ostrich, incapable of flight at all. It really did live, though, on the island of Madagascar, the fourth largest island in the world, 250 miles off the coast of Africa, and since it did not become extinct until the eighteenth century, reports of its existence, somewhat magnified in the course of tale-telling, almost certainly must have reached Marco Polo five hundred years earlier.

It is *Aepyornis maximus*, of which the first reliable report was published in 1658 by Etienne de Flacourt, governor of Madagascar under the French. He spoke of "a giant bird that lays eggs as big as an ostrich," and indicated that it still could be found in dark, swampy parts of the island. One of those eggs turned up in 1832—a foot in diameter, and an indigenous family was using it as a water bowl. Then came the discovery of more eggs, and in 1850 some of its enormous bones, which were shipped to the Paris zoo. The zoo director, Geoffroy St.-Hilaire, calculated that the eggs had the volume of 150 hen's eggs, enough to make an omelet for 75 people, and that the bird itself must have stood sixteen feet tall. He named it *Aepyornis maximus*, "the tallest of the high birds."

When a complete *Aepyornis* skeleton came to light a few years later, it was possible to see that the bird had been only nine or ten feet tall, still a colossus, and must have weighed close to a thousand pounds. But no one had seen a live one since Flacourt's time, and there have been no signs of any in the modern era. The swamps that seem to have been its habitat have dried up over the centuries, the forests surrounding them

were destroyed as agriculture expanded, and no doubt the huge flightless birds were slowly driven into extinction by these environmental changes.

It is altogether probable that sightings of them in earlier days had given rise to the legend of the roc, though of course they could not have flown about carrying elephants or anything else, lacking as they were in the ability to fly. In any case their load-carrying capacity would have been limited by the square-cube law: when you double the size of a bird, you increase the area and thus the weight-lifting power of its wings by a factor of four, but you multiply its weight by eight, so its muscle tissue would be insufficient for getting an elephant-carrying bird off the ground.

Tolkien, writing fantasy, did not care about such matters, nor did Marco Polo, relaying myths of giant birds, know anything about the square-cube law. But H.G. Wells, that greatest of all science fiction writers, certainly was aware of the problem, and so, in his short story “Aepyornis Island,” which he wrote toward the end of the nineteenth century, he tells us of a certain Mr. Butcher, who, seeking rare orchids on the island of Madagascar, finds some eggs of extraordinary size in a swamp, takes them with him to a nearby desert island, and, stranded there by a treacherous boatman, finds some diversion by watching one of the eggs hatch. Out of it comes “a nice friendly little chap . . . about the size of a small hen.” But the bird is, of course, an Aepyornis, and it grows and grows until by the end of the second year it stands a substantial fourteen feet high and is not so friendly at all. It begins to kick and peck in the most frightful way, and chases Butcher up a tree. “Here was this extinct animal mooning about my island like a sulky duke,” Butcher says, “and me not allowed to rest the sole of my foot on the place.” But humans are cleverer than giant birds, and finally, reluctantly, Butcher ties a sharp blade to his fishing-line, whirls around and lets it fly, and kills the great avian.

When at last he is rescued he takes the bones with him, selling them to the British Museum, and the creature is identified not just as an Aepyornis but as a new species, *Aepyornis vastus*, bigger even than the one already known. And, says Wells in conclusion, since Butcher’s time other and even bigger fossil bones have turned up—first *Aepyornis vastus*, and then the larger *Aepyornis titan*, and then *Aepyornis vastissimus*, bigger yet.

But none of them could have carried elephants around. Wells knew his science. Tolkien’s giant eagles, and Marco’s rocs, belong to the realm of fantasy. The bird that tormented the unhappy Mr. Butcher could well have existed, and that makes all the difference.