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***Verdaguer and the Minhocào***  
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# VERDAGUER AND THE *MINHOCÃO*

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As a Brazilianist only recently attracted to Catalan literature, I was astonished and pleased to discover, in Canto Eight of Jacint Verdaguer's *L'Atlàntida*, references to the legendary monstrous earthworm of Brazil, the *minhocão*, and to the German-Brazilian naturalist Fritz Müller.<sup>1</sup> My purpose, in this paper, is to provide some background information about both the *minhocão* and Müller, to discuss how and why Verdaguer might have included them in his text, and to try, however briefly, to place *L'Atlàntida* within the context of nineteenth-century scientific and intellectual history.

The first references to some sort of large fresh-water monster that preyed upon fish (and upon unfortunate fishermen) appear in Brazilian texts of the sixteenth century. That monster was one of a series of strange beings frequently described in chronicles of the period (Magalhães 97-9). Some of those monsters, like the boa constrictor, turned out to be real. Others, like the *minhocão*, were clearly imaginary; no modern scientist believes in the existence of the *minhocão*. Nonetheless, Brazilian peasants still occasionally report sightings of the enormous and blood-thirsty worm and of the immense tunnels or ditches it supposedly creates in mud-flats alongside rivers and lakes, and it is very much part of rural folklore (Casculo 2: 480). One result of this tradition is that the immense central administration building of the University of Brasília is universally referred to as the *Minhocão*.

Back in the early nineteenth century, however, the *minhocão* was widely regarded as real, and was described by a number of Brazilian and foreign naturalists—none of whom actually saw the worm themselves, relying upon the accounts of eyewitnesses. Raimundo José da Cunha Mattos, in 1836, reported that the giant worm was about two meters in diameter and about 40 meters long (Magalhães 97). A more serious naturalist, the French traveler Auguste de Saint-Hilaire, heard a number of accounts of the *minhocão* as he explored Brazil between 1816 and 1822, and was clearly convinced that it was real and that it did drag off and devour large animals. As a good early nineteenth-century naturalist, his interest lay in trying to classify it, and he concluded that it was probably a giant *Lepidosiren*, a variety of lungfish. Saint-Hilaire's account of the *minhocão*, published in part three of his

<sup>1</sup> The references appear in the fifth stanza of Canto Eight, with the spelling "minhocao," and in the first note to that canto (Verdaguer 103 and 147).

*Voyages dans l'intérieur du Brésil* (Paris, 1847-48) brought the beast to the attention of European readers (Saint-Hilaire 2: 138-40). I know of no concrete evidence that Verdagner ever read Saint-Hilaire's *Voyages*, although it was precisely the sort of text that most interested him as a young man.

In any case, the specific reference Verdagner cites in his note to Canto Eight is to a later and far more important naturalist, Fritz Müller. Müller was born in Germany in 1822, and died in Blumenau, a city of German immigrants on the Itajaí river in southern Brazil, in 1897. In 1877-78, when Verdagner referred to him, Müller was already recognized, as his obituary in the journal *Nature* later put it, as "one of the greatest and most original naturalists" of the nineteenth century (Gillispie 9: 559). He got his Ph.D. from the University of Berlin in 1845 and completed his medical studies in 1849, but was not allowed to become a doctor because of his fervent support of the Liberal Revolution of 1848 and his refusal to sign an oath of religious orthodoxy (Montgomery 84-85). Opposed to all forms of religion, Müller left Germany in 1852 and settled in Blumenau, in what is now the state of Santa Catarina. He was appointed professor of mathematics at the only high school in Santa Catarina in 1856, but relentless pressure from the Jesuits there finally led to his dismissal in 1867. From that time on he lived in Blumenau, continuing his fundamental research (Gillispie 9: 560). By 1877-78, Müller was one of the two most famous German disciples of Darwin (the other was Ernst Haeckel), and had published dozens of articles in German, French, and British journals. Müller's research on Brazilian Crustacea, described in his widely-read book *Für Darwin* of 1864 and in the 1869 English translation, *Facts and Arguments for Darwin*, provided the first objective scientific proof of the validity of the evolutionary hypothesis (Montgomery 105-06).

But even the greatest gods of science, like those of Olympus, occasionally make mistakes. On the basis of eye-witness accounts by individuals he knew personally, Müller became convinced of the reality of the *minhocão*. In 1877, he published an article, "Der Minhocão," in *Der Zoologische Garten*, a scholarly journal sponsored by the Frankfurt zoo; in the slightly more than four pages of the article, Müller described what he had heard about the beast, provided extremely detailed accounts of sightings in the Blumenau area, speculated on its species, and expressed the hope that it would eventually be possible to capture a *minhocão* for exhibit in a zoo (Müller 298-302). This is the article to which Verdagner refers in the first note to Canto Eight of *L'Atlantida*. Both the fifth stanza of that canto, in which the *minhocão* appears, and the note were added as Verdagner re-wrote his text in the period between the poem's presentation in the 1877 Jocs Florals and its publication in that same

year in the *Jocs Florals de Barcelona*, and the completion of the final text of *L'Atlantida*, published in 1878. Since Müller's article appeared in 1877, this makes perfect sense.

An obvious first question is how Verdaguer became aware of Müller's article? As far as I know, the poet did not read German. One possibility, of course, is that the article—which must have created something of a sensation—appeared in a French or Spanish translation in 1877 or early 1878. However, I have found no evidence of such a translation. The second possibility is that Verdaguer was in contact with Catalan intellectuals interested in scientific matters, and that one of those intellectuals brought the article to the poet's attention and translated it for him; two very likely possibilities, both of whom knew German well and were closely linked to the literary *Renaixença*, are the remarkable Catalan "natural philosophers" Josep Miquel Guàrdia and Josep de Letamendi.<sup>2</sup> There is solid evidence that Verdaguer was not simply aware of the general content of Müller's article, but had before him a version of the original text. Here, first, is part of Verdaguer's note: "... els qui suposan haverlo vist, li atribueixen una llargaria de 250 pams i uns 25 pams de amplaria, i afegeixen que va cobert d'ossos com si fos una cuirassa i arranca pins com brins de molsa, i gira els rius a son gust, convertint los plans en llacunes" (147). Here are the relevant sections of the first paragraphs of Müller's article in English translation: "... a worm 30 spans long and three spans wide, girded with hard bone armor, which bends or breaks mighty fir trees (*Araucaria brasiliensis*) like blades of grass, which diverts streams into new paths, here changing dry land into bottomless swamps..."<sup>3</sup> Allowing for the relative imprecision of the Catalan *pam* and the German *Klafter*, the size of the beast—about 40 meters long, about 4 meters across—is essentially identical. Verdaguer adds that Müller "s'inclina a creure que pot ser un peix monstruós de l'ordre dels *Lepidosiren* o del dels *Ceratodus*"; Müller concludes, at the end of his article, that "One could certainly believe the animal to be a giant fish, perhaps a relative of the *Lepidosiren* or the *Ceratodus*."<sup>4</sup>

<sup>2</sup> For Guàrdia, see Carreras y Artau 78-130. A *menorquí* who spent most of his life in France, Guàrdia (1830-1897) collaborated on *L'Avenç* and corresponded regularly with important figures of the *Renaixença*, including Rubió i Ors and Collell (Carreras y Artau 123). For Letamendi (1828-1897), see Carreras y Artau 131-380. A Germanist, Letamendi presided over the *Jocs Florals* of 1872 (142-43), and was very close to Milà i Fontanals (187), but left Barcelona in 1878 for a professorship in Madrid (136).

<sup>3</sup> The German original (298) reads "...wenn er von einem 30 Klafter langen, 3 Klafter dicken Wurm hört, der von festem Knochenpanzer umgürtet, gewaltige Fichtenstämme (*Araucaria brasiliensis*) wie Grashalme zur Seite biegt oder umstürzt, der Bäche in neue Bahnen lenkt, hier trockenes Land zu unergründlichem Sumpf zerwühlt ..."

<sup>4</sup> In German (301), "Doch wird man wohl in ihm einen riesigen Lurchfisch, einen Vetter von *Lepidosiren* und *Ceratodus* vermuthen dürfen."

A second question is whether or not Verdaguer realized that Müller was a Darwinist. Darwin's ideas were widely discussed in Spain after 1867, in large measure because of the changes in education and science that followed the Revolution of 1868 (Glick, "Science" 267). The first real discussion of evolution in Spain was highly negative, an 1867 speech by Letamendi to the Ateneu Català (Carreras y Artau 200-04). While it did find supporters in Spain, particularly at the University of Valencia Medical School, Darwinism was vehemently attacked by the Church, by other traditionalist sectors of Spanish society, and by a number of leading Spanish literary figures, including Gaspar Núñez de Arce and Emilia Pardo Bazán (Glick, "Spain" 310-11). As far as I can tell, Fritz Müller's name does not appear in Spanish discussions of Darwinism between 1867 and 1878; the focus was upon Darwin himself and upon his more radical German disciple, Ernst Haeckel. As a result, Verdaguer and other Catalan intellectuals of the period might not have recognized Müller as a leading Darwinist. What is important—and highly ironic—is that Verdaguer used Müller's *minhocão* to validate his epic cosmology of monsters and of monstrous events, a cosmology which not only rejected Darwinism but also rejected major components of late-Enlightenment and early nineteenth-century science.

Opposition to much of modern science was surely inevitable given Verdaguer's education in Vic; his teachers there probably shared the view expressed by Don Carlos, the Carlist pretender, in an 1874 interview in English: science "wishes us to discard the truth which has borne the test of ages, and to accept their whimsical theories instead... Religion and education should go hand in hand with each other, for science without religion is blind" (Glick, "Spain" 267). What is extraordinary is that Verdaguer did not simply oppose modern science, as Don Carlos so vehemently did, but that he sought to use his remarkably diverse readings and his poetic talent to conciliate science and theology. Almost from the moment *L'Atlàntida* appeared, critics have complained that Verdaguer failed in his attempt to fuse Christianity with Greek legend.<sup>5</sup> I would argue, however, that Verdaguer's aim was even more ambitious: to fuse modern science and traditional Catholicism, using a superimposed apparatus of Hercules myths, which do not appear in Plato's account of Atlantis, in order to create a new vision of the world—to "fer mons," as Verdaguer described the process in his 1877 poem "Vora la mar," as well as to "desfer mons."<sup>6</sup> That vision of the world was intended to be at once scientifically valid and theologically acceptable—no easy matter indeed.

<sup>5</sup> See, for one well-known example, the comments of Manuel de Montoliu (8: 157-59).

<sup>6</sup> For a full and original discussion of "Vora la mar," see Torrents 143-62.

The chief obstacles to such fusion lay in the disciplines of geology and of biology. Geology was the greater obstacle. By the middle of the nineteenth century, advances in geology had directly challenged the facts and the chronology of scripture; the evidence of fossils proved the existence of very ancient creatures never mentioned in the Bible, and increased understanding of basic geological processes—the slow rise and fall of mountains, to give but one important example—taught both that the earth was immensely older than Scripture allowed, and that its most fundamental contours had changed slowly but dramatically over a vast stretch of time.

Traditionalist scientists throughout Europe responded to the challenge of geology with the theory generally known as Catastrophism, primarily represented in the first half of the nineteenth century by Georges Cuvier and Louis Agassiz (Bowler 109-29). For the catastrophists, the history of the earth could still be made to fit Genesis: fossils were the bones of giants or of dragons, beings destroyed by catastrophes, like the Biblical Deluge, that took place only thousands of years ago; a collective memory of those monsters survived in European popular culture, as in the *dracs* and *gegants* of rural Catalunya. Other, equally recent cataclysms of fire or water or ice were responsible for the almost instantaneous creation or destruction of mountains and oceans, forming the landscape in which we live.

The destruction of Atlantis, of course, was the greatest non-Biblical catastrophe imaginable, and one which could most conveniently explain a whole range of troubling geological realities. Verdaguer's childhood fascination with the story of Atlantis inevitably led him towards Catastrophism, as did his religious education; also important, as has been frequently noted, was the Vic flood of 1863 (Casacuberta 97). Verdaguer's belief, expressed in the preface to *L'Atlàntida*, that nature "amb les coses més petites dóna imatge de les coses més grans" (19) allowed him to extrapolate that local inundation into a vision of a universal catastrophe, one which explained fundamental geological facts—the enlargement of the Pyrenees and of the Iberian Peninsula, the subsidence of the Mediterranean, the opening of the Straits of Gibraltar, and the creation of islands from the Mediterranean all the way to the Antilles, Columbus's destination at the end of the poem.

The second challenge was biology, and here again Verdaguer utilized the Atlantis story in order to support another, slightly more respectable and enduring scientific theory, Diffusionism, advanced by traditionalists in the eighteenth and early nineteenth century. The New World had revealed whole populations of life-forms—humans, animals, insects, flora, Müller's Crustaceans—which were unknown in Europe,

Africa, and Asia, and which did not appear anywhere in Scripture. Evolutionism explained the diversity of species in the Americas, but was theologically unacceptable for its exclusion of divine intervention; even less acceptable was Haeckel's belief that life had been created and evolved independently in many parts of the world. The Diffusionists, on the other hand, had argued for decades that no new species had been created after the biblical Creation; rather, divinely-created species had instead spread, unchanged from their original forms, throughout the world—either moving across land bridges that no longer existed, or carried by wind and waves.

Atlantis, for Verdaguer, was the ultimate Diffusionist land-bridge, and he therefore populated it with both Old World and New World life forms—the bison of the North American plains (Canto Two, Stanza 13), to cite perhaps the most notorious example, or all the non-European plants catalogued by Miquel de Garganta. The destruction of the Atlantean land-bridge, in Verdaguer's poem, separates the continents but allows for the unevolved survival of the flora and fauna of the Americas; that separation will, of course, come to an end with Columbus and the sea-borne bridge of the Spanish Empire, re-unifying God's original creation.

Verdaguer was not alone in perceiving the utility of the Atlantis story as a response to theologically unacceptable forms of scientific progress, but he was very much in the vanguard of the sudden and very rapid revival of interest in the Atlantis story in the second half of the nineteenth century. In 1869, Jules Verne's fictional Captain Nemo discovered the ruins of Atlantis. In the same year, the Abbé Charles Étienne Brasseur de Bourbourg claimed to have found detailed references to Atlantis in Maya inscriptions (de Camp 35-37). In 1874, Godefroy de Roisel published his *Études anté-historiques: Les Atlantes*, which Verdaguer translated at length in the first note to Canto Three.<sup>7</sup> In 1882, 4 years after Verdaguer wrote that note, Ignatius Donnelly's pseudo-scientific tract, *Atlantis: The Antediluvian World*, became a huge international best-seller, and within a few years associations of Atlantis-believers met regularly in London, Paris, and New York (Forsyth 2-4). It is difficult to explain precisely why belief in Atlantis became what we would now call a cult so very rapidly—within the space of only two decades. Was it fear of the approaching end of Hugo's "century of light," or a concern that humanity, through scientific and technological progress, might have reached the limits of divine tolerance and condemned itself, like the inhabitants of Atlantis, to total destruction?<sup>8</sup>

<sup>7</sup> The selections Verdaguer translated are on pp. 35-37 of the original.

<sup>8</sup> The explosion of interest in Atlantis and other catastrophic events is evident in the

What is clear, however, that Atlantis quickly came to symbolize not simply a theology –based reaction against certain scientific theories, but a rejection of all of science– and of all of religious orthodoxy as well. The second book Godefroy de Roisel published was a defense of spiritualism,<sup>9</sup> and by the end of the century Madame Blavatsky and a host of other mediums were describing themselves as the reincarnations of long-dead Atlanteans or offering to put true believers in direct contact with the lost souls of Atlantis (Forsyth 6-7; de Camp 54-58). While Verdaguer's motives in writing about Atlantis were very different indeed, it is vitally important to understand the world-view that underlay both *L'Atlantida* and the impact of the Atlantis story in the late nineteenth century: a belief both in great goodness and in great evil, in superhuman powers of creation and of destruction as well; a belief in the continued existence, just beneath the surface of the modern world, of dark and powerful forces, of terrifying primordial monsters like Fritz Müller's *minhocão*, of the demons whose voices Verdaguer later came to believe he heard in the "casa d'oració" on the Carrer dels Mirallers in Barcelona.

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<sup>9</sup> *L'Idée spiritualiste*. Paris: F. Alcan, 1896.

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