

produced by the Tigris and Euphrates; he cites the case of the city of Hira, formerly a seaport, which, after the lapse of three hundred years, was situated far in the interior.¹ The same author devotes a chapter to setting forth the ideas current at that time with reference to the origin of the sea and the cause of its saltness. Side by side with purely hypothetical conceptions, one meets with interpretations and comparisons which show that the Arabs were possessed of tolerably correct notions on many questions relating to the sea. Mas'ūdī admitted the spherical form of the earth and of the surface of the ocean; when one sails on the open sea the low-lying land first disappears, then the mountains sink gradually, and, at last, the summit is lost to sight.² He thus supports his views by reference to the classical example; indeed, in all this the Arabs simply followed the Greeks, and especially Ptolemy.

In speaking of marine animals Mas'ūdī merely relates marvellous accounts of certain creatures; he says that some seas contain animated beings, while others, the Great Ocean for instance, have none.³ The naturalist appears to better advantage in the passages relating to the origin of the ocean and its saltness, to which reference has been made. "Some maintain," he writes, "that the sea is a remnant of the primitive

¹ Mas'ūdī, *op. cit.* See, in particular, the anecdote of Khaled and Abd-el-Mesih, vol. i. ch. ix. pp. 248-253.

² Mas'ūdī, *op. cit.*, vol. i. ch. viii. p. 213. This demonstration was formerly used by the ancients (see *Almagest*, lib. i. ch. iii. p. 12, ed. Halma).

³ Mas'ūdī, *op. cit.*, tom. i. ch. viii. p. 185. See, for example, his account of the unicorn, whale, dragons, and crabs. Notwithstanding all the improbability of the narration in which the Arab writer gives his imagination free play it may not be without interest to quote a passage relative to marine monsters. It shows, at least, the preoccupation they had with reference to animals living in the sea, and the speculations in which they indulged regarding the exploration of the ocean. The following is the legend reported by Mas'ūdī relative to the foundation of Alexandria:—"The building of Alexandria was commenced, and the foundations laid, when, protected by the night, animals rose out of the depths of the sea, and destroyed all that had been done. . . . Just at the same rate as the work advanced, and in spite of the presence of the guards charged to drive them away as they came out of the water, the work in the city was every morning destroyed. Alexander was seized with anxiety at this spectacle; he meditated on what he should do to free the city from this great calamity. One night, while he reflected in solitude on these events, a stratagem occurred to him. The next day he called his workmen, and ordered them to construct a box of wood ten arms' lengths long and five wide. All around in the interior of this box plates of glass were fixed, and layers of pitch, resin, and other substances were applied to the wood to prevent the water from penetrating into the interior. They also reserved a place for attaching ropes. Alexander then entered it along with two of his secretaries, clever artists—and commanded that the cover of the box should be closed, and stopped up with similar coatings of pitch, &c. Two large vessels now put to sea. Weights of iron and lead and heavy stones had been fixed to the lower part of the box in order to carry it to the bottom, for, being filled with air, it would otherwise have floated. Then the box was attached by cables between the two ships, which were prevented from separating from each other by planks placed between them; the cables were now allowed to run out, and the box descended to the bottom of the sea. Thanks to the transparency of the glass and the limpidity of the water, Alexander and his companions saw marine animals and species of demons having a human form and a head like that of ferocious beasts. Some held hatchets, some saws or hammers, resembling workmen with tools. Alexander and his fellow-adventurers traced and figured on paper all these monsters, reproducing their exact aspect, their stature, and varied forms. He then shook the cords, and at this signal the box was drawn up by the sailors of the two vessels. Alexander then came out of the box and returned to Alexandria. There he ordered the workmen who wrought in iron, copper, and stone to reproduce these animals according to the drawings he had brought. The figures being finished, he caused them to be placed on blocks along the shore, and proceeded with the construction of the city. Night arrived. When the marine monsters came up out of the water, and found themselves face to face with their own images placed along the edge of the sea, they immediately took to the open ocean, and never showed themselves again."