

guised by mythological fictions, as to be utterly valueless to the antiquary or philosopher.

Proofs of elevation of twenty-four feet. — During a late survey of Conception Bay, Captains Beechey and Sir E. Belcher discovered that the ancient harbour, which formerly admitted all large merchant vessels which went round the Cape, is now occupied by a reef of sandstone, certain points of which project above the sea at low water, the greater part being very shallow. A tract of a mile and a half in length, where, according to the report of the inhabitants, the water was formerly four or five fathoms deep, is now a shoal; consisting, as our hydrographers found, of hard sandstone, so that it cannot be supposed to have been formed by recent deposits of the river Biobio, an arm of which carries down loose micaceous sand into the same bay.

It is impossible at this distance of time to affirm that the bed of the sea was uplifted at once to the height of twenty-four feet, during the single earthquake of 1751, because other movements may have occurred subsequently; but it is said, that ever since the shock of 1751, no vessels have been able to approach within a mile and a half of the ancient port of Penco. (See Map, p. 437.) In proof of the former elevation of the coast near Penco our surveyors found above high-water mark an enormous bed of shells of the same species as those now living in the bay, filled with micaceous sand like that which the Biobio now conveys to the bay. These shells, as well as others, which cover the adjoining hills of mica-schist to the height of several hundred feet, have lately been examined by experienced conchologists in London, and identified with those taken at the same time in a living state from the bay and its neighbourhood.*

Ulloa, therefore, was perfectly correct in his statement that, at various heights above the sea between Talcahuano and Conception, "mines were found of various sorts of shells used for lime of the very same kinds as those found in the adjoining sea." Among them he mentions the great mussel called Choros, and two others which he describes. Some of these, he says, are entire, and others broken; they occur at the bottom of the sea, in four, six, ten, or twelve fathom water, where they adhere to a sea-plant called Cochayuyo. They are taken in dredges, and have no resemblance to those found on the shore or in shallow water; yet beds of them occur at various heights on the hills. "I was the more pleased with the sight," he adds, "as it appeared to me a convincing proof of the universality of the deluge, although I am not ignorant that some have attributed their position to other causes."† It has, however, been ascertained that the foundation of the Castle of Penco was so low in 1835, or at so inconsiderable an elevation above the highest spring tides, as to discountenance the idea of any permanent upheaval in modern times, on the site of that ancient port; but no exact measurements or levellings appear as yet

* Captain Belcher has shown me these shells, and the collection has been examined by Mr. Broderip.

† Ulloa's Voyage to South America, vol. ii. book viii. ch. vi.