

which separate the different plains as they rise like steps one behind the other. The elevatory movement and the eating-back power of the sea during the periods of rest have been equable over long lines of coast; for I was astonished to find that the step-like plains stand at nearly corresponding heights at far distant points. The lowest plain is 90 feet high; and the highest, which I ascended near the coast, is 950 feet; and of this only relics are left in the form of flat gravel-capped hills. The upper plain of S. Cruz slopes up to a height of 3,000 feet at the foot of the Cordillera. I have said that within the period of existing sea-shells Patagonia has been upraised 300 to 400 feet: I may add that, within the period when icebergs transported bowlders over the upper plain of Santa Cruz, the elevation has been at least 1,500 feet. Nor has Patagonia been affected only by upward movements: the extinct tertiary shells from Port St. Julian and Santa Cruz cannot have lived, according to Professor E. Forbes, in a greater depth of water than from 40 to 250 feet; but they are now covered with sea-deposited strata from 800 to 1,000 feet in thickness: hence the bed of the sea, on which these shells once lived, must have sunk downward several hundred feet, to allow of the accumulation of the superincumbent strata. What a history of geological changes does the simply-constructed coast of Patagonia reveal!

At Port St. Julian,<sup>1</sup> in some red mud capping the gravel on the 90-foot plain, I found half the skeleton of the *Marauchenia Patachonica*, a remarkable quadruped, full as large as a camel. It belongs to the same division of the *Pachydermata* with the rhinoceros, tapir, and paleotherium; but in the structure of the bones of its long neck it shows a clear relation to the camel, or rather to the guanaco and llama. From recent sea-shells being found on two of the

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<sup>1</sup> I have lately heard that Captain Sullivan, R.N., has found numerous fossil bones, imbedded in regular strata, on the banks of the R. Gallegos, in lat. 51° 4'. Some of the bones are large; others are small, and appear to have belonged to an armadillo. This is a most interesting and important discovery.