

provided for them by the time they rise; if they are not to wait to be dressed, or to shiver for want of fire, and if they be not restricted in their play for fear of rousing the adults of the family, they will not wish to lie in bed when they have had sufficient sleep. There is not a more delightful sound to a mother's ears than the joyous laughter of her little ones in the early morning; it speaks of health and happiness, and that freedom from care which only childhood can enjoy. If children be fretful in a morning, you may be sure either that they are poorly, or that their wants are not properly attended to, by making the morning hours pleasant, you reverse the habit of early-rising easy of acquisition; when we consider the effect which such a habit will have on the physical, intellectual, and moral powers of our children through life, we cannot too strenuously exert ourselves in assisting them to establish it. The impressions first made on the mind in the morning generally come through the day, and give a colour to every event which occurs. It is therefore of great importance that children should be spoken to with kindness and cheerfulness when they first arise; and if mothers cannot themselves attend to them, they ought to impress on the minds of nurses how much trouble they may save themselves, and how much happiness they may impart to their young charge, by getting them into cheerful happy temper as soon as they arise.—*Wether's Practical Guide.*

THE PERMANENCE OF SPECIES—The mind sinks from contemplating the confusion which first ensue, if the ideas which some entertain as "transmutations" between species, either in the vegetable or animal world, had any foundation in reality.

In that most instructive series of articles which we learned AGASSIZ is now contributing to the *Atlantic Monthly*, we have not known whether we admire more the clearness and simplicity of language, or the interest with which he has so far been enabled to surround subjects of a recondite nature. He began with the lower types of animal life, and has now reached Polyp Coral—the tiny builder of so many islands which now support the exuberant vegetation of the tropics and withstand all the power of the waves.

Of these Coral Polyps it appears that there are no less than five species. As to the length of time during which they have been at work, make the following extract, referring to the coral reefs on the Florida Coast:—

Estimating the growth of the Coral Reef according to these and other data of the same character, it should be about half a foot in a century; and a careful comparison which I have made of the condition of the Reef as recorded in an English survey made about a century ago with its present state would justify this conclusion. But allowing a wide margin for inaccuracy

of observation or for any circumstances that might accelerate the growth, and leaving out of consideration the decay of the soft parts and the comminution of the brittle ones, which would subtract so largely from the actual rate of growth, let us double this estimate and call the average increase a foot for every century. In so doing, we are no doubt greatly overrating the rapidity of the progress, and our calculation of the period that must have elapsed in the formation of the Reef will be far within the truth.

The outer Reef, still incomplete, as I have stated, and therefore of course somewhat lower than the inner one, measures about seventy feet in height. Allowing a foot growth for every century, not less than seven thousand years must have elapsed since this Reef began to grow. Some miles nearer the main-land are the Keys, or the inner Reef; and though this must have been longer in the process of formation than the outer one, since its growth is completed, and nearly the whole extent of its surface is transformed into islands, with here and there a narrow break separating them, yet in order to keep fully within the evidence of facts, I will allow only seven thousand years for the formation of this Reef also, making fourteen thousand for the two.

This brings us to the shore-bluffs, consisting simply of another Reef exactly like those already described, except that the lapse of time has united it to the main-land by the complete filling up and consolidation of the channel which once divided it from the extremity of the peninsula, as a channel now separates the Keys from the shore-bluffs, and the outer Reef, again, from the Keys. These three concentric Reefs, then, the outer Reef, the Keys, and the shore-bluffs, if we measure the growth of the two latter on the same low estimate by which I have calculated the rate of progress of the former, cannot have reached their present condition in less than twenty thousand years. Their growth must have been successive, since, as we have seen, all Corals need the fresh action of the open sea upon them, and if either of the outer Reefs had begun to grow before the completion of the inner one, it would have effectually checked the growth of the latter. The absence of an incipient Reef outside of the outer Reef, shows these conclusions to be well founded. The islands capping these three do not exceed in height the level to which the fragments accumulated upon their summits may have been thrown by the heaviest storms. The highest hills of this part of Florida are not over ten or twelve above the level of the sea, and yet the luxuriant vegetation with which they are covered gives them an imposing appearance.

But this is not the end of the story. Traveling inland from the shore-bluffs, we cross a low, flat expanse of land, the Indian hunting ground, which brings us to a row of elevations called