

of Lake Huron with those of Southern Europe—nor of Lake Superior with those of Northern Europe. [Prof. Agassiz proceeded to define these differences between them at length. In Lake Huron there are many of the perch family—none in Lake Superior, and so on. It is well known from geological data, that North America is the oldest continental land upon earth. The general ancient character of this country is deeply impressed upon the mind of the active geologist, and he [Prof. A.] could not help feeling it when exploring the Northern shore of Lake Superior. Is it not remarkable that animals now exist which are old-fashioned in their external zoological character—and that they should be of the same type with animals long since considered extinct? It is in North America where the Gaspikes live, and the gaspikie is the only representative of the periods when that fish only lived.

Among these fishes there are two types—one with smooth and the other with serrated scales. [Prof. A. explained by blackboard diagrams.]—the serrated scales have usually two dorsal fins. He had found in Lake Superior a new fish! with spines upon the opercular bones, and all the scales sharp and serrated, and, what has never been before observed in hard-scaled fishes, it has, like the Salmon an adipose or fatty fin.

Here, then upon Lake Superior, we have these old-fashioned fishes upon this old soil. He considered it important to trace our living animals in their relation to the Fossils, as also their geographical distribution. This country was undoubtedly the first dry land, and the animals preserved seemed to remind us of the golden ages.

Mr Redfield asked if the White Fish of the Lakes was not common.

Prof. Agassiz replied it is. He mentioned that he had collected 33 Fishes on Lake Superior, and exhibited drawings of several. About a dozen of them are entirely new varieties.

THE MISSISSIPPI VALLEY.

At the sitting of the Scientific Convention, in Philadelphia, Prof. Dickenson, in behalf of a Committee appointed to investigate the subject, made an interesting report on the sediments of the Mississippi River. The *North American* says:

The observation upon which the paper was based had been made through the course of eighteen years, but continued, particularly through the last two years with a view to this report. The report alluded to the vast quantity of rain water constantly falling in the valley of the Mississippi, and the fact that that great river was the only visible outlet for it. By data the report showed that the quantity of rain fallen was 11.3-8 times the quantity discharged by the river.—There are but two ways for this water to escape, one by the course of the river, and the other by evaporation. Thus the report arrived at a fact of the utmost importance to the planting interests of Louisiana and Mississippi, for the more exhalations are, removed the less liable will the low or bottom lands of these two States be to the periodical inundations by the river. The best method of promoting this was by clearing the forest land, and thus exposing the earth to the action of the sun.

The progress of population and civilization in those regions has already made so vast a change in the amount of evaporation that there is not now by twenty or twenty-five per cent as much water passes down the river as there was twenty-five years ago; for at that time there were annual inundations which do not occur now. Thus lands are rendered more valuable, and the dense fog which once covered the river and obstructed navigation are now infrequent.—The second section of the report, which treated of the sediment of the river, was very scientific, full of data and computations. On motion of Prof. Johnson, the thanks of the Association were tendered to the committee. In regard to the sediment of the river the result of 151 experiments with a tin tub charged

with the river water were made. The aggregate of the water changed in this tub at different times was a column of 1936 feet, by which there was deposited a column of sediment or solid matter of 46 1-2 inches. This sediment was submitted in three glass tubes. The Committee seemed to think it might still further settle or shrink, certainly not to less than 41 inches.

From these data, the Committee arrive at the conclusion that the proportion of sediment to the volume of water is as 1 to 528. It has already been ascertained that the quantity of water annually discharged by the Mississippi river is 11,833,360,636 880 cubic feet, therefore there must be deposited 28,188,053,892 1-2 cubic feet of solid matter.

THE DEAD SEA.

The Bible is yet destined to receive illustration from all the tracks of research in which men engage. And we doubt not that some new illustrations of the history of the overthrow of the Cities of the plain will be derived from the exploring expedition recently sent to the Dead Sea, by the Government of the United States. The following account of the expedition is taken from an American paper:—

"The store ship *Supply* took out Lieut. Lynch, and two malleable boats as transports. These boats were carried over mountain gorges and precipices by the party appointed for the expedition, and on the 8th of April, 1848, they were launched upon the Sea of Galilee. The Richmond Republican has condensed the interesting article of Lieut. Maury as follows:—

"The navigation of the Jordan was found to be most difficult and dangerous from its frequent and fearful rapids. Lieut. Lynch solves the secret of the depression between Lake Tiberias and the Dead Sea, by the tortuous course of the Jordan, which in a distance of sixty miles, winds through a course of two hundred miles. Within this distance Lieut. Lynch and his party plunged down no less than twenty—even thirty—rapids, beside many others of less descent. The difference of level between the two seas is over a thousand feet.

"The water of the Jordan was sweet to within a few hundred yards of its mouth. The waters of the sea were devoid of smell, but bitter, salt, and nauseous. Upon entering it, the boats were counteracted by a gale, and it seemed as if the bows, so dense was the water, were encountering the sledge hammers of the Titans, instead of the opposing waves of an angry sea!

"The party proceeded daily with their explorations, making topographical sketches as they went, until they reached the Southern extremity of the sea, where the most wonderful sight that they had yet seen awaited them.

"In passing the mouth of Udom, (Sodom,) we unexpectedly, and much to our astonishment," says Lieut. Lynch, "saw a large, rounded, turret-shaped column, facing S. E., which proved to be of solid rock salt, capped with a borate of lime; one mass of crystallization. Mr. Dale took a sketch of it, and Mr. Anderson and I landed with much difficulty and procured specimens from it."

"The party circumnavigated the lake, returned to their place of departure, and brought back their boats in as complete order as they received them at New York. They were all in fine health.—Thanks to the good management of Lieut. Lynch, the whole cost of this scientific exploration of the Dead Sea was but \$700. From the letters of Lieut. Lynch, quoted by Maury, we translate the following interesting facts elicited by exploration:

"The bottom of the northern half of this sea is almost an entire plain. Its meridional lines at a short distance from the shore scarcely vary in depth. The deepest soundings thus far, 182 fathoms,

(1128 feet) Near the shore, the bottom is generally an incrustation of salt, but the intermediate one is soft mud, with many rectangular crystals—mostly cubes—of pure salt. At one time Stellwager's lead brought up nothing but crystals.

"The southern half of the sea is as shallow as the northern one is deep, and for about one-fourth of its entire length the depth does not exceed three fathoms (18 feet.) Its southern bed has presented no crystals, but the shores are lined with incrustations of salt, and when we landed at Udom, in the space of an hour, our foot-prints were coated with crystallization. The opposite shores of the peninsula and the west coast, present evident marks of disruption. There are unquestionably birds and insects upon the shores, and ducks are sometimes upon the sea, for we have seen them—but cannot detect any living thing within it, although the salt streams flowing into it contain fish. I feel sure that the results of this survey will fully sustain the Scriptural account of the cities of the plain."

He thus speaks of the Jordan:—"The Jordan, although rapid and impetuous, is graceful in its windings, and fringed with luxuriance, while its waters are sweet, clear, cool, and refreshing."

"After the survey of the sea, the party proceeded to determine the height of the mountains on its shores, and to run a level thence via Jerusalem to the Mediterranean. They found to the summit of the West bank of the Dead Sea more than one thousand feet above its surface, and very nearly on a level with the Mediterranean.

"It is a curious fact," says Lieut. Maury, "that the distance from the top to the bottom of the Dead Sea, measure: the height of its banks, the elevation of the Mediterranean, and the difference of level between the bottom of the two seas, and that the depth of the Dead Sea is also an exact multiple of the height of Jerusalem above it."

"Another no less singular fact, in the opinion of Lieut. Lynch, is that the bottom of the Dead Sea forms two submerged plains, an elevated and a depressed one. The first, its southern part, of mud covered by a shallow bay; the last, its northern and largest portion, of mud and incrustations and rectangular crystals of salt—at a great depth with a narrow ravine running through it, corresponding with the bed of the river Jordan at one extremity, and the Wady 'el Jeb,' or wady within a wady at the other!"

"The slimy ooze," says Lieut. Maury, "upon that plain at the bottom of the Dead Sea, will not fail to remind the sacred historian of the 'slime pits' in the vale, where were joined in battle four kings with five."

POWER OF THE EVANGELICAL PRESS.—The American Tract Society has nine steam presses continually in operation, throwing off an average of about 2400 volumes per day, and including tracts, more than 27,000 distinct publications every twenty-four hours. It distributes monthly 130,000 copies "American Messenger," and 10,000 copies of the same work in German. The "Illustrated Christian Almanack" for 1849 is ready for circulation, and of this annual 159,000 copies will be printed. Since the first of April, the Society has granted for gratuitous distribution over 9,000,000 pages of evangelical reading. During the month of August, 33 new colporteurs were commissioned and 15 commissions were renewed.

A LARK OF BLOOD.—Dr. Dick estimates the number of those who have perished directly or indirectly by war, at 14,000,000,000. Elisha Buritt, the learned Blacksmith, has taken the estimates of Dr. Dick, and estimating the average quantity of blood in a common sized person, states that the blood in the veins of those fourteen thousand millions would fill a circular lake of more than seven-teen miles in circumference, and ten feet deep, in which all the navies of the world might float.