

[From the Britannia.]

THE NORTH-WEST EXPEDITION.

As the vessels appointed for the search of Sir John Franklin and his crews are now proceeding to their destination, it may interest our readers to give a glance at the successive enterprises which have been undertaken to ascertain the northern outline of America.

The enormous length of the voyage round the Cape of Good Hope to India was the first stimulant to the discovery of a passage nearer the arctic circle. If the northern seas were as open as the Atlantic, the voyage from London to India by Hudson's Bay and Behring's Straits might be made in less than two months. The temptation was powerful, and we can ask no stronger proof of its power than its having tempted the least romantic nation in the world, our own, to make the experiment during 300 years; and, after the failure of all these experiments in succession, to persevere, until the whole nation shrinks at their hazards, is persuaded of their hopelessness, and forbids their future trial.

The first expedition on record was that under John Cabot, a Venetian, and his three sons. The expedition was fitted out by patent from Henry VII., and discovered Newfoundland.

In the reign of Edward VI. an expedition sailed under Hugh Willoughby. One of his ships was damaged in the early part of the voyage, and returned. The remainder wintered in Lapland, and was heard of no more for some years, when their remains were said to be discovered by some Russian hunters. They probably died of cold, for it was also said that their provisions were found. This catastrophe took place in 1553.

After a succession of fruitless voyages by foreigners, Frobisher, an old navigator, sailed in 1576 with similar ill fortune. But Davis, who followed him in ten years after, discovered the Straits which bear his name.

The hope of the passage had now strongly excited the interest of the maritime powers. And the Dutch, then at the head of navigation, and expecting to reach China first, sent out an expedition under Barentz in 1596. But, as the north-west seemed impracticable, Barentz was directed to sail to the north-east. They found all movement blocked up by the ice, and, after suffering dreadfully from cold, returned.

In 1636 an expedition by the ships of the Muscovy Company was terminated by the death of the captain, Knight, killed on the Labrador coast by the natives.

In 1697 Hudson, the most memorable of those explorers, sailed with the ships of the Muscovy Company, and pushed his way up to 81½ degrees. In 1698 he attempted the north-east passage, failed, and pronounced it impossible. In another attempt he discovered the great bay which has immortalised his memory, and was abandoned by his crew and heard of no more.

The discovery of Hudson's Bay revived the spirit of adventure, and Sir Thomas Button ascertained that, to the north of America, the sea was crowded with an archipelago of islands. The ships belonging to the Company of Merchant Adventurers discovered Baffin's Bay.

In 1699 Munk, sent out by Denmark, was frozen up in Chesterfield Inlet, and was found next spring alive, with two of his crew, the rest, in number 49, lying dead around him.

Then followed fifteen attempts at intervals of a century and a half, down to the voyage of Middleton, in 1741. After reaching Repulse Bay he returned to England, but on his arrival was charged with having suppressed his discovery of the north-west passage, in order to assist the monopoly of the Hudson's Bay Company! Middleton in vain denied the charge. He could find none to believe him. And so convinced now were the Admiralty that the discovery was possible, that in 1743 they offered a reward of £20,000 for the first crew who should reach Behring's Straits! Middleton is now fairly acquitted.

All these attempts by sea were only clever follies. The only hope can be in exploring the coast by land expeditions. In 1796 Hearne was sent by the Hudson's Bay Company to the north. He found the Coppermine River, and followed it to the ocean. The second land expedition was by M'Kenzie, in 1786. He passed down the river which bears his name, and reached the ocean, determining the latitude of Whale Island (in 69 deg. 14 min.)

The third was the expedition under Sir John Franklin, the enterprising officer, whose fate now excites so much anxiety. In 1820 he reached the mouth of the Coppermine Ri-

ver, and examined the coast to some extent east and west.

The appointment of the late Sir John Barrow as Under Secretary of the Admiralty sustained this spirit of enterprise, and the attempts under Captain Ross, Parry, Beechey, and Back, are now familiar to the public, and have produced nothing but the unnecessary evidence of the skill and fortitude of the British sailor.

The highest latitude reached seems to have been 82 deg. 45 min., in Hudson's voyages, and the most western longitude 110 deg. by Parry, who thereupon announced to his crew that they had thus become entitled to £5000 awarded by the Admiralty.

By those conjoined land and sea expeditions, the whole northern coast of America had been explored, excepting an interval of 146 miles. To complete this interval seems to have been the purpose of the late expedition sent out under Sir John Franklin. His two ships were victualled for three years, and his crews consisted of upwards of a hundred picked men and officers. The fifth year of their absence is now advanced; and though various attempts have been actively and anxiously made by Government and by others to obtain some tidings of these brave men, nothing beyond some rumour of the Esquimaux has reached England. Hope must not be abandoned while any chance of rescuing the expedition exists; but the latest intelligence from the north is that the coast, from Behring's Straits to M'Kenzie's River, has been just explored, without finding any trace of Franklin. That he is not on the coast now unhappily seems certain. But he may have been carried to the north, and embayed among the clusters of islands which crowd the Polar Sea. That he cannot have wanted provisions seems probable, as fish, fowl, and deer are sometimes abundant; but until some direct intelligence is to be obtained, the national anxiety cannot subside.

The question of the north-west passage is now decided. An ocean lies to the north of America, but it is impossible for ships or any means of navigation possessed by our age. If some power of nature or art should yet be discovered which would enable ships to cut through ice as through water, or men habitually to endure a degree of cold which freezes mercury, the passage might have some value. But until then we can only regret the loss of life and treasure which these expeditions have occasioned. Still we will not despair.

The Farm.

[From the Puritan Recorder.]

PROFESSOR JOHNSTON'S SECOND LECTURE, ON THE RELATIONS OF GEOLOGY TO AGRICULTURE.

Geology is the science which examines the soils, and all the materials which constitute the surface of the globe. If we were to dig from the surface towards the centre of the earth, we should at length come to a strata of rocks, lying one above another, and below these, to solid or unstratified rock. The relation of these to each other was illustrated by a geological map.

The next observation of the Geologist discovers that the strata of these rocks like the fingers upon a man's hand, always maintain the same relative position, a fact of great practical importance both in geology and in agriculture.

The third observation of the Geologist is, that these strata, however different the materials of which they consist, may be reduced to one or the other of three substances; limestone, clay or sand-stone more or less hard. These three substances are differently mixed to form the various soils upon the surface of the earth, as three primary colors may form and endless variety of hues.

The fourth observation of the Geologist is, that the substance of these stratified rocks differs in degree of hardness, as clay and brick, chalk or marble, both being lime-stone. Heat and other causes make this difference. A stratum may be clay near the surface and sand farther down, or vice versa. Hence the physical condition of the rocks materially affects the character of the soil in which they are found and which they form.

The fifth observation of the Geologist respects the production of soil from these rocks by the action of heat, air, water and the like, disintegrating and uniting them with decomposed vegetable and animal matter. If chalk is thus reduced, the result is a lime-stone soil; if clay, a clayey soil; if sand-stone, a sandy soil.

If all strata lay in a horizontal position, the consequence would be great uniformity of soil upon the earth's surface. But earthquakes, volcanoes and other causes have broken these strata and given them different inclinations, so that their edges approach the surface and produce great variety in the soil. Hence, from a geological survey or map of a country, a scholar may form an accurate judgment respecting its agricultural capabilities, and the kind of husbandry to which it is adapted; as Scotland, which is known to be a formation of old red sand-stone, which makes it capable of high cultivation and fertility. Yet as other causes may modify this result, it is necessary to confirm geological deductions on this subject by the arts of chemical analysis and of cultivation.

The same principle was also illustrated by a portion of the soil of England, where clay abounded, and consequently where the cereal grains could not be cultivated without artificial processes, without lime; but where the marshes and bogs were capable of yielding crops of grass. Near this formation, is what is called "the Oxford clay" which the sun in summer hardens till it will ring under the hammer, but which the rain in spring and autumn softens till cattle mire in it, and which of course is ill adapted to agricultural purposes.

From these illustrations, the relations of Geology to Agriculture are evident. Similar facts appear over the surface of the globe.

The new red sandstone forms a light soil, easy of cultivation, and on that account generally selected by new settlers in a country, as the gravel hills of England or the soil of New Brunswick. As the country increases in age, this soil is either improved by the arts of cultivation, or is abandoned for that which is new, where the farmer by less labour, secures a larger harvest. By this migratory cultivation much of the territory of New-Brunswick has been skimmed, two or three annual crops being taken off, and then the land abandoned for new soil. The same subject is to be continued in the next lecture.

Eighth Meeting in the Capitol.

POULTRY.

Reported for the Puritan Recorder.

The President of the Legislative Agricultural Association took the Chair at the appointed hour, and announced the subject, *Poultry*; on which a report was read, showing that two millions of dollars were paid in 1848 for poultry and eggs in this city; in New York one and a half million of dollars for eggs in the same year, and in the whole United States there were \$12,000,000 invested in these two articles; in England \$50,000,000, and in France \$57,000,000. His remarks on the profit of poultry to the farmer confirmed what was said in a recent number of this paper on the subject.

A Committee of three was appointed to report to the meeting a constitution for the organization of a society of Fowl Breeders.

Col. Thayer, of Braintree, spoke on the importance of this subject to the farmer and to the community, and advocated the formation of a State society. Mr. Giles, of Rhode Island, desired that the proposed organization should extend over New England. Mr. Buckminster concurred in this judgment. The Committee reported a constitution for such a society, and after some discussion, it was adopted. The payment of two dollars constitutes a member for life. Two exhibitions are to be held every year, one on the second Tuesday in November, and the other on the second Tuesday in February.

Mr. Jaques, of Somerville, thought that one thousand names would shortly be enrolled, and \$2000 put into the treasury. On motion of Mr. Giles, a Committee of seven was appointed to nominate officers.

Col. Thayer, thought that his farm of 290 acres was one of the best in Massachusetts, yet \$35, invested in poultry had yielded him more profit than all his farm! Two acres of ground divided in yards would accommodate 50, 100 or even a greater number. They succeeded better by dividing them into two or three companies and sheltering them in different houses. His hens that laid produced as many eggs this winter as they did last summer. He had also found ducks and geese profitable.

Mr. Giles, said that he kept 20 kinds of fowls and found them very profitable. Similar remarks were offered by Mr. Jaques.

At the close of the meeting, an opportunity was given for signing the constitution. We cordially welcome this association to the so-

cial family, and hope that it may prove a valuable member. We shall live in expectation of tasting its fruits if not before, at the next Thanksgiving.

Grain Fields of the West.

James Davis, of Waverley, Ross county, Ohio, cultivated 1800 acres exclusively Indian Corn, and has this winter a corn crib filled, which is three miles long, ten feet high, and six feet wide. We presume this is one of the largest corn fields in the world, owned by a single individual. On the Great Miami Bottom, adjoining Lawrenceburg, Ind., about 25 miles below Cincinnati, there is one field seven miles long by three miles broad, extending in fact to Aurora, which has been regularly planted down to corn for near half a century. Although corn is one of the most exhausting crops, no manure is ever used, and the soil is as fertile as ever. The Wabash Valley is also remarkable for the extent of its corn fields. We should be glad to see the statistics of some of the corn fields on the Illinois prairies.—*Cincinnati Gazette*.

COMSTOCK'S ALLEGED DISCOVERY IN AGRICULTURE, which the New-York Legislature proposes to test, professes to be a botanical one, which is of such a nature, that it cannot be made the subject of a patent. It is claimed that it will keep in health and fertility that sickliest and most difficult of trees to manage in this country, the peach, that it will insure the thriftiness of any plant to which it may be applied, and make the raising of good crops a far more certain thing than it now is. The discovery consists, says the *Evening Post*, in avoiding certain errors in cultivation which are most likely to be prejudicial in the best soils, and often produce disappointment to the farmer who has taken the most pains.—*Newark Sentinel*.

PLOUGHING.—The depth of plowing is to be determined by the nature of the soil, but never less than six inches. The width of the furrow to correspond with the depth. In sandy land, the furrow turned over flat, in stiff clay left at an angle.

REARING LAMBS.—Like all other young stock, lambs ought to be kept steadily growing without getting too fat. Where a healthy, strong, and young ewe has a good range of pasture, the lamb may acquire so much fat as seriously to interfere with its thrift when taken away and put upon its winter's food. Experienced flock masters say they have frequently lost lambs from this cause; and that when an ewe has twins, and the milk is divided between the offspring, this loss never occurs. This is an important fact for the practical man.—*Agriculturist*.

Remarkable Temperance Fact.

It appears that the principles of temperance have lately been the subject of much discussion in Germany: so much so, indeed that some of the states of the German Confederation determined no longer to permit strong drinks to be dispensed to soldiers. Instead of this, they ordered that the money formerly spent in drink should in future be expended in an extra allowance of substantial food. It was very desirable to know what was the result, and it was ordered that the most exact statistical calculations should be made to prove what, since the change, had been the sanitary condition of the soldiers. It is necessary to say, that the greater part of those who had been deprived of strong drinks were the inhabitants of towns, of a constitution less strong and inured to fatigue. The soldiers to whom they continued to distribute large quantities of strong drink, were for the most part strong laborers or wood cutters from the country, and yet it was proved that the sanitary state was as follows: Corps to whom strong drinks were distributed—Holstein, out of 3690 men, there were 82 sick, 1 out of 44. Mecklenburg, out of 3580, there were 82 sick 1 out of 44. Oldenburg, out of 718 men, there were 24 sick, 1 out of 29. Hanover, out of 13,054 men, there were 284 sick, 1 out of 46. Corps to whom strong drinks were not distributed—Brunswick, out of 2096, there were 18 sick, 1 out of 116. Oldenburg, out of 2819 men there were 47 sick, 1 out of 60. Hanes Towns, out of 2199 men, there were 14 sick, 1 out of 156. The writer who collected these facts, ends with these words—"After examples so decisive, and the testimony of superior officers who have made analogous observations there remains nothing to add."—*Econ. Economist*.