

Scientific.

Vegetation of the Frozen Regions.

We take the following from a review in the London Literary Gazette, of Seemann's "Botany of the Voyage of H. M. S. Herald under the command of Captain Kellet." The Herald was one of the ships engaged from 1845 to 1851 in exploring the Arctic regions, and in search of Sir John Franklin. Among the more remarkable features of this uninviting region are the ice-cliffs crowned with soil and luxuriant vegetation. The following account of them will be new to most of our readers:—"The soil is always frozen, and merely thaws during the summer, a few feet below the surface. But thawing is by no means uniform. In peat it extends not deeper than two feet, while in other formations, especially in sand or gravel, the ground is free from frost to the depth of nearly a fathom, showing that sand is a better conductor of heat than peat or clay, and corroborating the observation of the accurate J. D. Hooker, who, after a series of experiments in India, arrived at the same conclusion. The roots of the plants, even those of the shrubs, do not penetrate into the frozen subsoil. On reaching it they recoil as if they touched upon a rock through which no passage could be forced. It may be surprising to behold a vegetation flourishing under such circumstances, existing independent, it would seem, of terrestrial heat. But surprise is changed into amazement on visiting Kotzebue Sound, where on the tops of icebergs, herbs and shrubs are thriving with luxuriance only equalled in more favoured climes. There, from Elephant to Eschscholtz Point, is a series of cliffs from seventy to ninety feet high, which present some striking illustrations of the manner in which Arctic plants grow. Three distinct layers compose these cliffs. The lower, as far as it can be seen above the ground, is ice, and from twenty to fifty feet high. The central is clay, varying in thickness from two to twenty feet, and being intermingled with remains of fossil elephants, horses, deer, and musk oxen. The clay is covered by peat, the third layer, bearing the vegetation to which it owes its existence. Every year, during July, August, and September, masses of ice melt, by which the uppermost layers are deprived of support, and of ice melt, by which the uppermost layers are deprived of support, and tumble down. A complete chaos is thus created; ice, plants, bones, peat, clay, are mixed in the most disorderly manner. It is hardly possible to imagine a more grotesque aspect. Here are seen pieces still covered with lichens and mosses, there a shoal of earth with bushes of willows; at one place a lump of clay with senecios and polygonums, at another the remnants of the mammoth, tufts of hair, and some brown dust, which emits the small peculiar to burial-places, and is evidently decomposed animal matter. The foot frequently stumbles over enormous osteological remains, some elephants' tusks measuring as much as twelve feet in length, and weighing more than 240 pounds. Nor is the formation confined to Eschscholtz Bay. It is observed in various parts of Kotzebue Sound, on the river Buckland, and in other localities, making it probable that a great portion of extreme Northwestern America is, underneath, a solid mass of ice. With such facts we must acknowledge that terrestrial heat exercises but a limited and indirect influence upon vegetable life, and that to the solar rays we are mainly indebted to the existence of those forms which clothe with verdure the surface of our planet." A curious fact is stated respecting the condition of the vegetable world during the long day of the Arctic summer.—"Although the sun never sets while it lasts, plants make no mistake about the time, when, if it be not night, it ought to be; but regularly as the evening hours approach, and when a midnight sun is several degrees above the horizon, droop their leaves, and sleep even as if they do at sunset in more favoured climes. "If man," observes Mr. Seemann, "should ever reach the Pole, and be undecided which way to turn, when his compass has become sluggish, his timepiece out of order, the plants which he may happen to meet will show him the way; their sleeping leaves tell him that midnight is at hand, and that at that time the sun is standing in the north."

Influence of the Moon.

A Paris astronomer has published the results of twenty years' observation upon the in-

fluence of the moon upon the weather. From the new moon to the first it rained (during the period of twenty years embraced in the calculations) 764 days; from the first quarter to the full moon it rained 845 days; from the full moon to the last quarter it rained 761 days; and from the last quarter to the new moon it rained 896 days. So that during the moon's increase there were 1,609 rainy days, and during her decrease only 1,457—a difference of 152 days. This difference is more likely to have been accidental than the result of any natural cause, and the conclusion which we derive from the statement is that the moon has no influence upon the weather.

Ancient Sculpture.

The demolition of a building attached to the old Abbey of St. Germain, at Auxerre, has led to the discovery of an old piece of sculpture, dated as far back as the eleventh century. The principal subject represents Daniel in the Lion's Den. On the left is a fragment of a statue, probably of David, as there is a harp with four strings lying by it. On the right is a representation of the parable of the rich man. This morceau, although mutilated, is curious, from the vigorous energy of its composition. A man is represented in a sitting posture, holding a large purse between his legs, and which he appears to be defending against two devils armed with pitchforks, who are strangling him with cords. This piece of sculpture has been deposited at the museum of the town.

Lexicography.

Some years ago a gentleman, after carefully examining a folio edition of Johnson's Dictionary, formed the following table of English words derived from other languages: Latin, 6,732; French, 4,321; Saxon, 1,665; Greek, 1,168; Dutch, 691; Italian, 311; German, 106; Welsh, 90; Danish, 75; Spanish, 46; Icelandic, 59; Swedish, 34; Gothic, 31; Hebrew, 16; Teutonic, 15; Arabic, 13; Irish, 6; Runic, 4; Flemish, 4; Erse, 4; Syriac, 3; Scottish, 3; Irish and Erse, 2; Turkish, 2; Irish and Scotch, 2; Portuguese, 1; Persian, 1; Frisian, 1; Persian, 1; uncertain, 1; total 15,734.

The Farm.

Farmer's Talk.

EDS. CULTIVATOR.—If there is any one class of citizens and laborers that I feel an interest in, more than another, it is the farmers. If I were asked the reason of this feeling, I should answer, it is because I am, myself, one of that class.

It has been often said by agricultural writers that farmers, as a class, are the least intelligent and poorest educated of any, and it often seems that we have the least influence and are the least respected. Whether this idea be correct or not, may be of no particular consequence in itself; yet, if such be the case, it is well to inquire whether, as farmers, we have not something to do in this matter.

It is certainly remarkable to notice what a small amount of useful knowledge, we can content ourselves with. The reason of this is, that our present wants must be satisfied and the future cared for, while the mind is left to starve. The great object of life appears to be to make money and buy more land. The life of an American farmer has always been and must ever be one of labor. This law of labor we cannot alter, and we would not if we could, because it is just and right. Yet I am satisfied that the mass of farmers labor a great many more hours in the year, than is necessary, because they do not work to the best advantage. We do not combine half enough of genuine head labour with our hand work, and for the ostensible reason that we can get along just as well without it. But it is not enough that a farmer can improve his soil so as to make it profitable; for hundreds of farmers do that, who possess an amount of general knowledge which every good citizen ought to be ashamed of.

There is a principle beyond all this, which every farmer ought to recognize, that is, to adopt improvement for improvement's sake. Not so much to gratify a selfish and penurious appetite, as to refine and enlarge the generous, noble feelings of the man. Like all other classes of men we are in pursuit of happiness, and one of the most common methods of seeking it, yet by far the most unsatisfactory, is in the pursuit of wealth.

One of the best antidotes for this restless, craving feeling, is to seek for and cultivate a

contented mind, but not a dull and sluggish one; for with all the followers that "Ignoramus" has had from time immemorial, he has never succeeded in making a single person rationally happy and contented. I believe firmly that the occupation of the farmer is better calculated to ensure real enjoyment than any other business. Still there are hundreds of farmers who live a toilsome and complaining life because they do not labor for the right objects.

I am well aware that it must be the farmer's general rule to carry on his business for profit, and I find that those farmers who adopt the most improvements, both useful and ornamental, are the ones who succeed best and make the most money.

We have often to struggle against poverty, but this should not discourage us. Honesty of purpose, with an indomitable perseverance and energy, will eventually accomplish anything. We may safely depend that in industry and the improvement of the mind, we are laying the foundation for future good and real success. L. DORRIS. Derby, Ct.

Breeding Stock.

EDS. CULTIVATOR.—I have been a reader of agricultural papers for many years, and frequently feel a desire to shed ink in the cause; but, by patiently waiting, have generally found my subjects ably treated by better pens. I dream of good cattle, and acknowledge receiving many a valuable hint on breeding, from the articles, with which the Cultivator, from time to time, has favored us, upon this subject. I was much interested, and have read and re-read the article in the May number, from the pen of Dr. Cleaveland, respecting "An influence affecting the purity of blood in stock." It is true much disappointment is often met with in breeding animals of good pedigree, but this is commonly traceable to other causes, than that assigned by the Doctor. How common it is, in looking over a herd, to have some particular excellence or defect pointed out, and traced to some remote progenitor. I have in my mind's eye now, a celebrated bull, the best I ever saw, for fullness of points and depth of pedigree, many of whose get, for color and marking, go back several generations, and some of them (the taint may be in the cows, of course) go—nobody knows where, to an inferior cross evidently.

It is laid down as a rule, that "The mother's system is influenced and changed, by the young she carries in her womb, and if the male parent be of a different breed, her blood is contaminated, and she rendered similar to a mongrel for the remainder of her life."

This assertion would be startling if true; but that nature, in some of her freaks, should occasionally produce something which would warrant the above, is nothing strange. All females are more or less imaginative, and liable to mark their young.

The story of Jacob and his peeled rods, is familiar to all. A more modern instance is on record of a polled cow, which, while in heat, was with a red and white horned ox, and the same day was served by a red polled bull, both of pure blood; yet in due season she produced a red and white horned calf.

A breeder of Devons in this state, having pastured a lot of marked cattle with his cows, was constrained the next season to veal most of his pure bred calves, for they were badly marked with white. I remember reading of the mongrel Quagga colt several years ago; it was then supposed that the imagination, and not the blood of the dam was affected. I live in a neighborhood where Short-horn, Devon, and Polled cattle, are bred, and extensively crossed with the native breed—some using first one, then another; and in hundreds of instances of cows thus served, have not yet seen the first trace of the blood of a previous sire. I own a valuable bull, whose services are in good demand; now, if the Doctor's theory is true, how unwise are my friends to pay me \$5 for calves from old cows, whose blood has been contaminated by inferior bulls. The most sanguine of our breeders can never hope to see the various pure breeds occupying the place of the common cattle of the country. The true course for farmers will be to send their best cows to well bred males. This course, steadily followed for a few years, will give us a stock, that for all practical purposes, except bull breeding is fully equal to any imported; yet were not the above theory of contamination fallacious, how utterly futile would be such efforts at improvement. In conclusion,

allow me to say, that I write not as one having authority, but as one who six days of the seven wears

THICK BOOTS.

National Garden.

The *Jardin des Plantes*, or national garden at Paris, costs annually, according to the foreign letters of P. Barry, about \$100,000 for its entire support. It contains in a growing state, arranged and labelled, all the best new and old kitchen vegetables, where market gardeners may come and learn their qualities; a great collection of medicinal plants; a complete assemblage of the grasses; an arboretum (of ornamental trees); a beautifully cultivated fruit garden; a full green-house and hot-house department; a menagerie of everything from all parts of the world, from elephants to monkeys; wild and domestic birds; the richest anatomical collection in Europe, comprises over 15,000 preparations; 60,000 specimens of minerals, and fifty thousand species of dried plants; a natural history library of some thirty thousand volumes; besides which there are experiments in all departments of horticultural constantly in progress, and gratuitous lectures delivered by the most eminent scientific men. Now the question naturally suggests itself, which would be the greatest benefit, to the people of this country, such an institution as this, at \$100,000 annually, or a navy costing yearly one hundred times this amount.

To have a Good Horse.

It is not sufficient to have a good colt, the product of a superior mare with a stallion of good blood and established reputation. This is necessary, but it is not all that is necessary. A most promising colt that attracts universal admiration while it follows the mare may be grown into an almost worthless horse. How then, having a good beginning, shall we grow a good horse, for good horses alone are profitable to raise? By exercising the greatest care in their management until they have ceased to be colts. Many almost ruin a colt, the first winter, by starvation, by turning it into the yard to run with the young cattle, to pick up a scanty nourishment and that of the cheapest and coarsest food. There is on the other hand no one season of its life when care, and good and full feeding of appropriate food will tell so much for good as this same first winter. A friend, who, for now many years has annually sold two or three young horses at the highest market prices, has often assured us that at no time in the life of his colts did he take so good care of them and feed them better than during their first winter; and that, by the effect produced upon them the first year he could tell what kind of horses they would become.

There is something so absurd in scanting the supply of nourishment, to a young growing animal! Some fancy that such a course will render the animal hardy. The only effect produced upon the growing animal by an insufficient nutrition, is to hinder his best development. Wait until he has attained his growth, and then stint him if you choose. It can be done then with less injury.

Colts are often put to hard work at too young an age. It not unfrequently happens that you will see a horse of five with all the wear of ten in his appearance. This should never be. The exercise of the same judgment in the management of colts most use towards children would prevent this.

Colts should be put to exercise and training at an early age, and may do light labor to advantage, but to put upon four years the labor proper only for six or seven years, has been the ruin of many a promising animal. There are other suggestions that occur properly in this connection, but we will omit them, considering the two mentioned above as the most important.—Granite Farmer.

STRAWBERRIES GRAFTED ON ROSES.—In autumn, a few dog-roses of good sorts, on their own roots, are selected and planted in pots; at the same time a well-rooted strawberry is placed with each rose. In spring, when the runners push out, two or three of them are tied up to the stem of the rose. It is well known that the runners of the strawberries soon make their own roots, and in due time these roots are cut away, making the cuts as for a scion, and then they are grafted on the rose-stem, "without cutting or rearing the runners from the parent plant in the ground." They should be preserved very carefully to lead the sap upwards to the scions, and, treated in this way, the strawberries will vegetate upon the rose-tree for some time.