

CANADIAN INSTITUTE.

At a recent meeting, Professor Hincks brought under the notice of the Institute the peculiarities of a remarkable plant found in western tropical Africa, the *Welwitschia Mirabilis* named after the gentleman, Dr. Welwitsch, a German *swan* who was the first to make it known to the scientific world. It consists of a trunk composed of material more like bark than ordinary woody fibre, which rises only a few inches above the ground, but attains the circumference of as much as fourteen feet. From the trunk proceed two horizontal ribbon like leaves, six feet long, and sometimes of even greater length, and the whole is surmounted by a crown of cones, in appearance somewhat resembling ordinary fir-cones. It has been found near Cape Negro, in the district of Louando and at points along the coast five hundred miles distant from this. The soil in which it grows is remarkable arid. A traveller says that, proceeding from the coast thirty miles into the interior, he found this *Welwitschia Mirabilis* in considerable abundance, and no other vegetation whatever except a few miserable grasses. The characteristic peculiarity of the plant, in a botanical point of view, is that it appears to be an undeveloped plant, a germ beginning to grow with the cotyledons above the ground, and arrested in its growth in that condition. In an ordinary dicotyledonous plant, the two cotyledons decay, and the plant derives its woody substance from its leaves. In this plant the cotyledons are permanent, and constitute its whole foliage. Its life is said to be of the duration of a century. Professor Hincks discussed the views which had been propounded by European botanists, as to the place which should be assigned to this remarkable plant, in the classification of the vegetable kingdom, and stated what was his own theory on the subject. He combated also Dr. Hooker's attempt to make its peculiarities lend some support to Darwin's new doctrine about the origin of species, and declared himself as holding strongly, with the great naturalist Agassiz, the old doctrine of the continuity of species, in both the vegetable and the animal kingdoms.

Prof. Chapman then gave an explanation of the mode of detecting ordinary metals in mineral bodies, by the aid of the common blow-pipe, and other cheap, portable, and easily procurable apparatus, with illustrative experiments. By the process which he explained, any of the following metals—copper, lead, tin, gold, iron, silver, manganese, cobalt, and antimony—could be detected in a very few minutes, if they existed in mineral bodies, in quantities capable of being at all profitably wrought. The apparatus and re-agents, necessary for the detection of these metals, he enumerated as follows:—A blow-pipe; a small steel forceps; some charcoal; some soft iron wire; a small hammer; a small anvil; consisting of a piece of steel polished on one of its faces; a knife; a small magnet; a file; a small lamp; a small white plate or saucer; some carbonate of soda; some borax; a little saltpetre; a small quantity of muriatic acid; and some bone-ash. The whole he said, could be obtained at a cost of about \$2. He first illustrated the process, by taking a mineral body supposed to contain copper. Having chipped off a piece, he took it up in the forceps, and held it for a few moments in the flame of the lamp brought to play upon it by the blow-pipe, until it became ignited. He then put it into a drop of the muriatic acid laid upon the plate, moistening it in the acid; picked it up again with the forceps, and brought it under the action of the blow-pipe, when a brilliant greenish blue flame was exhibited, showing infallibly the presence of copper. He then showed how iron could be detected, by igniting the substance under the blow-pipe, placing it on the plate, and trying whether the magnet would attract it. He explained also, with illustrative experiments, how the other metals named could be readily detected, by means of the simple and cheap apparatus above enumerated. In reply to Dr. Scadding, Prof. Chapman stated that there was scarcely any tin found on this continent. A little had been found in California, but hardly in greater quantities than to furnish specimens for museums. One of the members, to test the blow-pipe process which had been explained of handed to the Professor a shiny and apparently metallic substance, asking him to say what metal it contained. On testing it with the blow-pipe, Professor Chapman replied that it was one of the micas, and contained no metal at all, with the exception of a very small quantity of oxide of iron or of manganese.

CATTLE IN THE FIELD.—The *Maine Farmer*, in an article on the preservation of the fertility of our fields, advises that the cattle be not allowed to feed them down during the fall. It says: It is a custom with many to feed off the second crop of their mowing fields with cattle. This is called turning into the fall feed. Many believe that this practice does no damage to mowing fields—that the hay crop will be just as large during the next year as if the cattle had not fed it off—that it is the same in effect as cutting 'rowen,' or aftermath and carrying it into the barn. A little experience and observation will convince one that this is not in fact the case. If the cattle, in their mode of gathering the second crop, nip no closer than the scythe, or tramped it no harder than the man who mows, and gathers it in does, perhaps there would be little difference in the two, but the fact is, that cattle not only nip close and tramp hard, but they are generally allowed to follow it up until snow falls and covers the ground up. It is only that time the soil is pretty well stripped of herbage and has no clothing for winter, and but a little fund to start upon next spring. Now if the grass had been suffered to grow after all the hay from it had been closed there could be not only a coating of grass to serve as a protective mulch to roots during the winter, but the heads or collars of the roots would be stored with food for the early nourishment of the starting blades of the coming season.

The next total eclipse of the sun visible in this hemisphere will be on Aug. 7, 1869.

A CHINESE TEMPLE IN SAN FRANCISCO

The following graphic description of a Chinese Temple in San Francisco, on the occasion of a late religious festival held there. We take from the *Bulletin* of that city:—

The first thing which strikes the visitor on entering the vestibule of their sanctuary is a most ancient and fish-like smell, and if he approaches the altar he will discover that the breath of the gods smells strangely of stale salmon. Evidently their drink is not nectar, neither is it possible that their victuals is ambrosia. The first object of Chinese adoration that meets the eye is a high and hilarious god, standing some seven or eight feet in his stockings, and flourishing a cigar in his left hand like a Montgomery street swell. The attitude of this idol is not very graceful, while his legs widely spread apart, and the air with which he braces back against the wall, suggest that he is under the influence of the rosy. Altogether he has a convivial look about him highly cheerful to behold, and the effect is to be heightened by two horns with serrated edges which sprout gaily from behind his ears. His belly is modelled like a bass drum, but so nicely adjusted as not to seriously interfere with the even tenor of his whole contour.

Passing on and ascending a narrow and fishy staircase, we find a balcony, gay with flags and lanterns, and illuminated with scrolls written in sinuous characters probably pregnant with the wisdom of the immortal Kung-fu-tse whom the Latins named Confucius. We may very well conclude that the books which lie open—but shut so far as our understanding is concerned—before us, are the *Solido Declavito* and the *Concord* a Formula of their peculiar church. Here the sound of music is loud—reckless disciples play crushing anvil choruses upon immense gong while milder mannered musicians kept up a rattling accompaniment on kettle-drums, blended with a symphony of shrill notes from the lips of cracked flutes. The gods stand it marvellously well, however, and so does the temple, though a much less noise brought down the walls of Jericho. In the temple, the gods and worshippers are so numerous that one calls them no longer John but legion. You stumble over a little god on the floor, or precipitate your head into the stomach of a big one braced against the altar. The big ones number two, and face each other in Gog and Magog style. In height they are Anaks each standing a good eight feet above the level of the floor, without counting in a slight wrinkle at the back which would give them a few inches more were it ironed out. Each has one foot perched on a supposititious rock, while the other rests on a paper tiger—they seem to have been bucking against the tiger the night through. One holds a golden apple in his hand, plucked from no one knows what Hesperides; the other grasps a golden wreath. They are spangled like harlequin, and bearded and moustached like bogus barons. A chronic lassitude rests on their features—probably occasioned by having been up all night. Before them is spread either a late breakfast or an early lunch, but they seem in no hurry to attack it. Undoubtedly they feel safe in the assurance that no one else will eat it. Ranged around the wall, in convenient little sentry boxes, stand fudgy little gogs with splay feet. These be the common 'Josses' of the concern. One of them is habited like a Christian martyr, and has the dolorous look of one condemned to be burned. The apprehension seems not entirely groundless, as a number of torches are lighted close to his feet. Should they burn on, the spectacle would probably be furnished of a baked tomato.

The worshippers in the purlieus of the temple are not very devout. They loaf around and take all sorts of liberties with their gods, even to the occasional poaching of a tom-cat from their breakfast table. There are dowagers with head dresses which tower up in crinigerous Babels, and damsels with eyes more clam-shell than almo d-shell shaped. There are male Chinamen having the look of chimpanzees and others dandified enough in appearance to stand as lay figures in barbers' windows. Altogether, the picture is a motley one, and well worth seeing, but curious visitors should be vaccinated before entering the synagogue, and carry smelling salts with them.

CONVERSATION NEWS

STATISTICS.—To a certain class of mind (of which we profess ourselves irresistible to probably be) the most interesting reading in the world is difficult statistics. Facts which cost a great deal of labour and inquiry, are more spicy to us than any novel. For instance, the following:—

According to the British census volume for 1861, there were then in the work-house a half-pay officer, a clergyman, 10 solicitors, 15 surgeons, an author, 68 schoolmasters, and 79 schoolmistresses. Not merely poor, but in prison for debt, were 12 officers in the army, 3 in the navy, 9 clergymen or ministers, 4 barristers, 32 solicitors, 2 physicians, 3 surgeons, 2 authors, 17 schoolmasters, 2 schoolmistresses, 10 gentlemen. Still worse off, in lunatic asylums, there were 85 clergymen, 10 ministers, 103 half-pay officers, 3 barristers, 90 solicitors, 5 physicians, 61 surgeons, 3 authors, 54 schoolmasters, and 80 schoolmistresses. According to the occupation list, 15 men called themselves natural philosophers, 1 described himself as a lexicographer, another as a chronologist, and 1 wrote himself down 'orator.' Of others we have rather mysterious accounts—3 were glyptographers, 2 geometers, 9 kamptulicon manufactures, 8 truffers, 33 boot leggers, 15 peel-makers, 29 mango merchants, 12 beetle makers, 42 gold-miner, and 2 toothpick-makers. Much has been said respecting occupation open to women. The census has its disclosures upon that subject. The enumerators found in 1861, among the women of England 10 bankers, 7 money-lenders, 274 commercial clerks, 25 commercial travellers, 54 brokers, 33 merchants, 29 farmers, 479 printers, 3 shepherds, 43,964 out-door agricultural laborers, 13 ladies were doctors, 2 were bone-setters, 6 were reporters for short hand writers, 3 parish clerks, 4 choristers, 4 teachers of elocution, 17 dentists, 2 knackers, 3 conjurers, 1 astronomer, 8 naturalists.

American papers announce the fact that the wife of General Tom Thumb is *inciente*.

BE YOUR OWN RIGHT-HAND MAN.

People who have been bolstered up and levered all their lives, are seldom good for anything in a crisis. When misfortune comes, they look around for somebody to cling to, or to lean upon. If the prop is not there, down they go. Once down, they are as helpless as capsize turtles, or unhorsed men in armour, and they cannot find their feet again without assistance. Such silken fellows no more resemble self-made men, who have fought their way to position, making difficulties their steppingstones, and deriving determination from defeat, than vines resemble oaks, or spluttering rushlights the stars of heaven. Efforts persisted in to achievements train a man to self reliance; and when he has proven to the world that he can trust himself, the world will trust him. We say therefore, that it is unwise to deprive young men of the advantages which result from energetic action, by 'boosting them over obstacles which they ought to surmount alone. No one ever swam well who placed his confidence in a cork jacket; and if when breasting the sea of life, we cannot buoy ourselves up and try to force ourselves ahead by dint of our energies, we are not salvage; and it is of little consequence whether we 'sink or swim, survive or perish.'

One of the best lessons a father can give his son is this: 'Work; strengthen your moral and mental faculties, as you would strengthen your muscles, by vigorous exercise. Learn to conquer circumstances; you are then independent of fortune. The men of athletic mind, who left their marks on the years in which they lived, were all trained in a rough school. They did not mount their high position by the help of leverage; they leaped into chasms, grappled with the opposing rocks, avoided avalanches, and, when the goal was reached, felt that but for the toil that had strengthened them as they strove it could never have been attained.'

SALT AND COLD WATER FOR SWINE. It is not a common practice, we think, to give salt to swine occasionally, while every farmer would consider it a prime duty to offer it to his neat stock, horses and sheep, as often as once a week. To be sure the swine get a little compared with the amount given to other animals. In proportion to their weight, why do they not need as much salt as the other stock on the farm?

We find an article going the rounds of the papers upon the use of salt for fattening swine. The writer states that he selected two pairs of barrow hogs weighing 290 lbs. each. One pair received, with their daily allowance of food, two ounces of salt; the other similarly fed, none. In the course of a week, it was easily seen that the salted pair had a much stronger appetite than the others, and after a fortnight, it was increased to two ounces apiece. After four months, the weight of the salted hogs was 350 pounds, while that of the unsalted, five weeks later, reached only 300 pounds. The experiment was repeated with almost precisely the same result.

If such should prove to be the general result, most farmers have not gained all the good advantages they might have done from the roots fed out. From the example cited there is no indication that the salt excited a morbid appetite, and produced unnatural flesh and fat. Of course a sound judgment must be exercised in the use of salt, as well as of grain or any other food.

Another neglect of swine—and sometimes it must be a cruel one—is that of not giving them a plentiful supply of pure cold water. Why it is supposed that the hog should not need water as well as the cow, and sheep—is more than we can tell. They do require it. When water is not given them, although fed with swill, they will drink heartily of the water collected in the yard or barn-cellar, after visiting their trough several times, and finding it empty and dry. Nothing is more grateful to them in a hot day than a bucket of cold water, drank from a clean sweet trough. We trust that farmers will give attention to the matter, and ascertain for themselves whether our suggestions are valuable or not.

CABBAGE.—The best method to preserve cabbage in the winter, is to gather them early, say about the first of November, when they are perfectly free from moisture, and hang them up, in a cool, dry cellar. The great secret lies in their being kept dry till needed for use. Another excellent way is to chop them fine, pack in a stone crock, in good cider vinegar, adding salt and pepper to suit the taste, and as much and as good sugar as you can afford when it is worth fourteen cents or more per pound. Now, if you put into this preparation a little bruised horseradish root, it will keep, sweet and good, "till the rebellion is crushed," if you do not eat it before, which you will be sure to do, if you know what is good. I raise for winter use a kind of cabbage which grows very large. When transplanting, I set them very deep as an experiment, and although this was done early in June, and the weather has been favorable, they do not head well, but spread out wonderfully in every direction, so that some of them are three feet in diameter, the admiration of every beholder. What ails the cabbage? Were they set too deep, or have they started for a warmer climate? Should the lower leaves be taken off, to make them head well, or not? Will some cabbage one answer?

RUSSIAN ARRESTS OF YOUNG LADIES IN POLAND.—In the meanwhile, however, young ladies are continually being arrested. Fifty, for the most part girls of from seventeen to nineteen years of age—some of them even younger—were taken one night last week, and are now shut up in prison. Old and young, men and women, are all treated alike in the matter of arrest, and are invariably seized in the middle of the night.—These nocturnal visits may cause some unnecessary alarm, but it is not the Russians who feel it; and on the other hand, the scandal that would be caused by taking a number of innocent young girls through the street, in the daytime, in the custody of soldiers, is avoided. From ten at night till four next morning are the Russian official hours for deeds that will not bear the light of day. *Warsaw Letter in Times.*

Canary seed comes from Sicily, and the crop this year is a failure; so look out for a rise.