

TWO BEAUTIFUL PALMS.

Although the palm tribe, as a whole, is indigenous to the tropics, some wandering members of the family may be found as far from the equator as the south of France; and one is a native of Asia, and grows wild in the region north of the Himalayas, up to latitude 44° N. The latter, of which we give an engraving, is the hardy palm (*Chamærops excelsa*); and the palmetta, of which four species are native to this country, is nearly related to it, as will be seen on an inspection of its foliage. The pure dark hue of its leaves, and the sturdy vigor of its general appearance, make it a highly ornamental tree in the shrubbery and plantation. Heat and abundant moisture are needed for its growth, and, like most other palms, it is capable of extensive utilization; its growth in tropical regions is enormous, and some fine specimens may be found in conservatories in our northern homes.

Another exquisite specimen of the palm genus is the *Pritchardia filifera*, of which we also give a representation; it is one of the most beautiful of the handsome family to which it belongs. All who have seen it will remember its remarkably fine appearance and the admiration which it excites. It is a native of this country, and grows farther north than any other of the palm tribe, its native habitat being the banks of the Colorado, in Arizona and New Mexico, where it bears the winter frosts without injury. It is excessively graceful in appearance, long white filaments falling from its palmate leaves, giving them the appearance of being furnished with plumes.

This beautiful variety of palm ought to occupy a conspicuous position, not only in private collections but also in those of public gardens. It will be found to form a good substitute for latanias, phoenixes, and similar palms, of which amateurs are rapidly beginning to get tired. In the south of Europe, says a correspondent of the *English Garden*, from the pages of which we select the engraving, it is perfectly hardy; but in more northerly climates it will succeed best under the protection of an ordinary conservatory or greenhouse.

The palm family is perhaps the most widely diversified of any botanical tribe that has distinct family characteristics; and the useful products obtainable from its members are very numerous. Houses are built of the wood, and roofed with the leaves; the fibers are used for all textile purposes; very many edible fruits are yielded by the trees; oil is extracted in prodigious quantities from one palm tree, and wine from another; and a tanning material resembling catechu is extracted from palm nuts. A common kind of sugar, called jaggery in the East Indies, is the product of a palm; and the betel nut, chewed by the natives of the Indian archipelago and elsewhere, is the fruit of a palm tree.

New Treatment for Cholera.

Asiatic cholera is so well known to be such a terribly fatal disease that any plan of treatment that gives promise of success must excite general interest. A method has lately been introduced by Surgeon Major A. R. Hall, of the British Army Medical Department, which, it is hoped, will lessen the mortality caused by this fearful malady. It consists in putting sedatives under the skin, by means of a small syringe (hypodermic injection), instead of giving stimulants by the stomach. Surgeon Major Hall has served nearly twelve years in Bengal, and has suffered from the disease himself. In most accounts of the state of the patient in the cold stage, or collapse of cholera, the heart is described as being very weak, and the whole nervous system very much exhausted. Stimulants have, therefore, almost always been administered; but experience has shown that they do more harm than good. Surgeon Major Hall observed, in his own case, while his skin was blue and cold, and when he could not feel the pulse at his wrist, that his heart was beating more forcibly than usual! He therefore concluded that the want of pulse at the wrist could not depend upon want of power in the heart. A study of the works of a distinguished physiologist, Dr. Brown-Séquard, with some observations of his own, suggested the idea that the whole nervous system is intensely irritated, instead of being exhausted; and that the heart and all the arteries in the body are in a state of spasmodic contraction. The muscular walls of the heart, therefore, work violently, and squeeze the cavities, so that the whole organ is smaller than it ought to be; but it cannot dilate as usual, and so cannot receive much blood to pump to the wrist. Surgeon Major Hall looks upon the vomiting and purging as of secondary importance, but directs special attention to the spasmodic condition of the heart and lungs. The frequent vomiting causes anything that is given by the mouth to be immediately rejected; so it occurred to him, as the nervous system appeared to want soothing instead of stimulating, that powerful sedatives, put under the skin, would prove beneficial. A solution of chloral hydrate (which has a very depressing action on the heart) was em-

ployed in twenty cases where the patients were either in collapse or approaching it, and eighteen of these recovered. They were natives of Bengal. It is probable that, among Europeans, in severe cases, more powerful depressants may be required; and Surgeon Major Hall recommends the employment of solutions of prussic acid, Calabar bean, bromide of potassium, and other sedatives. Opium (which is not really a sedative, but a stimulating narcotic) and all alcoholic stimulants are to be avoided, and nothing given to the patient to drink, in collapse, except cold water, of which he may have as much as he likes. It is to be hoped that this



THE HARDY PALM (CHAMÆROPS EXCELSA)

sedative treatment may have an extended trial, and that before long we may have further favorable reports concerning it.—*Chambers' Journal*.

Ozone.—What is it?

A certain seaside town has been considerably puffed into notoriety as a suitable resort for persons seeking health, on account of the quantity of ozone in the atmosphere. We will not dispute the fact, but it may be doubted whether one seaside town more than another naturally possesses any

specially large amount of ozone. What, however, is ozone? That is a question more easily asked than answered. It appears to be a highly concentrated condition of the oxygen which forms the peculiarly vital part of the atmosphere, and is produced through electrical agency. The mechanical action of pure air over vegetation is productive of ozone, but still more manifestly is this subtle quality produced by the dashing of waves and spray against the air. These lashings of air and sea mixed are, electrically speaking, in the nature of one substance rubbing on another. They evoke ozone, which, being inhaled in breathing, gives a stimulus to the constitution. Hence the benefit to health from a sea voyage, or a residence at a pleasant sea side resort. Mr. Binney stated, at a recent meeting of the Manchester (England) Literary and Philosophical Society, that the atmosphere of towns may be sensibly ozonized, and of course improved in quality by the action of public fountains. He says: "A water fountain may be regarded as a hydro-electric machine, the friction of the water issuing through the jets developing electric action, materially assisted by the conversion of the spray into aqueous vapor. I would suggest that this fact should be prominently brought before municipal bodies, to induce them to erect fountains in all available places in large cities, as sanitary agents. They might prove highly beneficial in crowded localities." It need only be added that the delicate and wholesome freshness of the air after a rattling thunder shower in summer is very much due to the development of ozone. The subject of ozone, in its various phases, is at present engaging the attention of scientific inquirers, and we may soon hear more about it.

METEORITES.

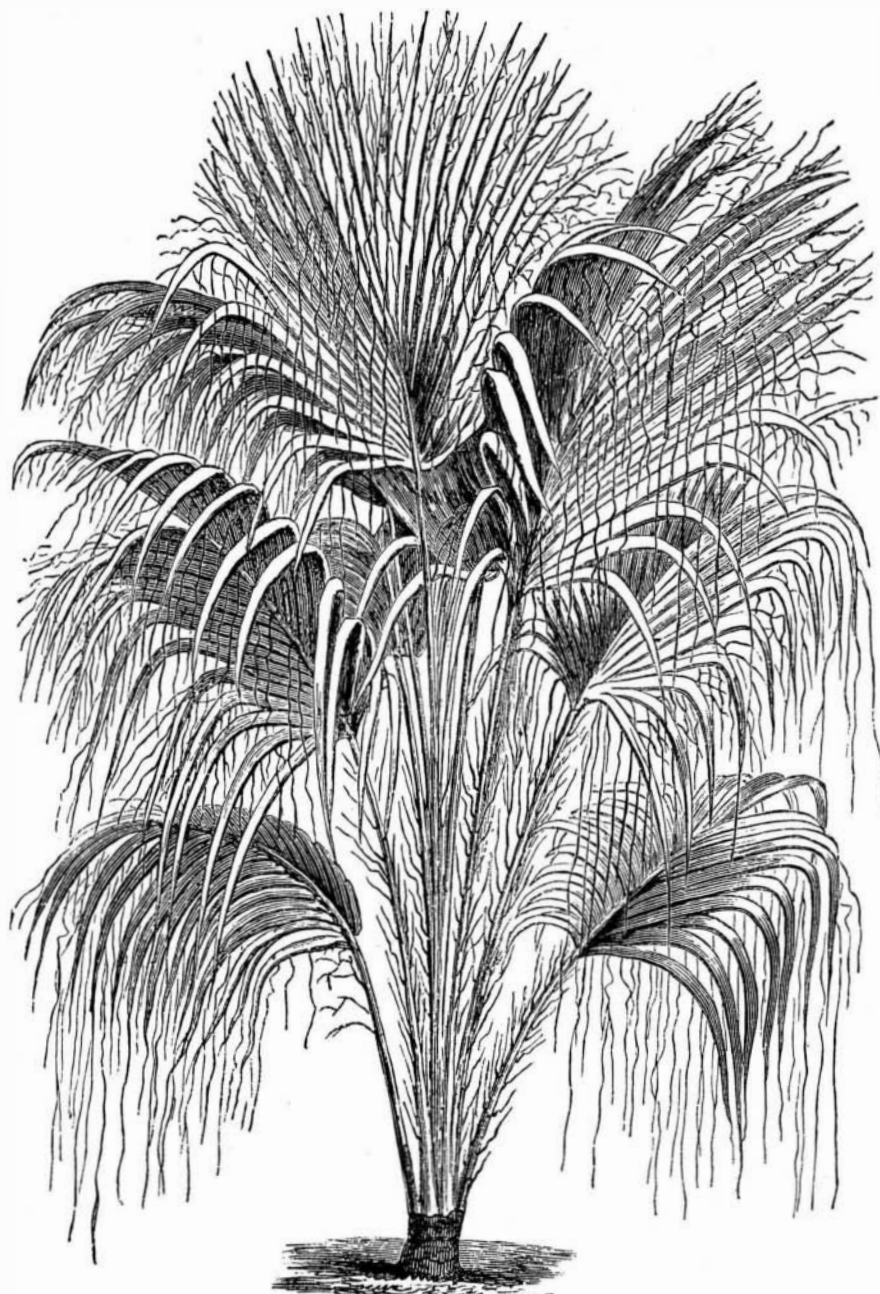
BY PROFESSOR C. A. YOUNG.

In the present article we propose to consider the so-called detonating meteors, or *bolides*, which from time to time fall upon the earth as masses of stone or metal. It may indeed be a question whether these bodies really differ from the ordinary meteors in any thing but size; many of the highest authorities think they do not. Still the fact that even during the most remarkable meteoric showers no sound has been heard, and not a single fragment has been known to reach the ground, seems to warrant us in classing the bodies by themselves, at least provisionally. They appear to bear much the same relation to the shooting stars which planets do towards comets.

As late as 1800 men of science in general were disposed to be very skeptical as to accounts of stones and iron falling from the sky, and those who admitted the fact had recourse to most curious and absurd hypotheses to account for it: some, for instance, thought the stones were formed in

the air by lightning, while others maintained that they came from volcanoes on the earth or moon. Chladni, however, in 1794 published a paper upon the origin of a remarkable mass of native iron found by Pallas, the Russian explorer in Siberia, maintaining it to be meteoric, as is now universally admitted; and to strengthen his position, he went into a careful criticism of various accounts of the fall of such bodies, compiling a catalogue of some 300, and affirming their credibility. His reasoning made an impression, but still failed to enforce general assent, until in 1803 an event occurred which put an end to all skepticism. On the 26th of April in that year, a meteor exploded over the village of L'Aigle in Normandy, within 85 miles of Paris; and more than 2,000 fragments, of weights ranging from 20 pounds to a fraction of an ounce, were scattered over a region of several miles. The Academy of Sciences sent a special committee to investigate the matter. They collected specimens, took the sworn depositions of those who had witnessed the phenomena, and in their report put the reality of the occurrence beyond all possible doubt.

The phenomena which accompany the fall of these bodies are much the same as those of the shooting stars, except that they are ordinarily far more brilliant; and observers who are near the path of the meteor usually hear a rushing roar, like that of a heavy railroad train, accentuated by several cannon-like reports which are sometimes heard at a distance of a hundred miles. At each of these explosions, whose cause is only doubtfully explained the meteor changes its course or breaks into fragments. In a few instances, when the fall took place in the daytime, no luminous phenomena were seen, and in one or two cases the fall of very small aerolites has been unaccompanied by noise. Thus, in March 1859, there was a shower of little stones in Harrison county, Indiana, one of which, about as large as a marble, fell within a few feet of a man and his wife who were standing in their cabin, with no other warning than the tearing of



PRITCHARDIA FILIFERA.