

A Criticism of Pasteur's Method.

Dr. Joseph Drzewiecki, physician to the University Clinic at Warsaw, has sent us a paper in which it is contended that the method of anti-rabic inoculation for the prevention of hydrophobia is unscientific. He claims that M. Pasteur has never given a satisfactory answer to the objections urged by Frisch, Ullman, and Peter; and he revives the arguments used by M. Luteaud in the *Journal de Medecine*, which were based on the statistics adduced by Pasteur. He points out that, although the English commission investigated 90 cases, in only 24 of these were the bites inflicted by undoubtedly rabid dogs, so that the number of 8 fatal cases was far in excess of the usual proportion of 5 per cent. Further, that, although according to the report of that commission the total mortality among the 2,682 cases treated by M. Pasteur would ordinarily have been 130 instead of the 40 actually recorded, it should have been stated that only 233 cases were bitten by rabid animals, and that therefore the estimated mortality ought to have been only 15. Both M. Luteaud and M. Peter argued that the Pasteurian method had increased the rate of mortality. The statistics of Dr. Kischensky are then quoted. They were obtained from the archives of the Katharine Hospital at Moscow. From them it appears that, of 307 persons bitten by unquestionably rabid dogs, 18 were bitten in the head (4 deaths), 90 were bitten on the hands (2 deaths), 25 on the feet (no death), and of 170 bitten through the clothes only 1 died. To these may be added 1 fatal case among 4 in whom the site of the bite is not recorded. This gives a total mortality of 2.6 per cent. The mortality among those bitten by rabid wolves (24 cases) was 30 per cent; according to M. Pasteur, it should be 82 per cent. In all the fatal cases the bites were very extensive, and on the head. Of 17 cases bitten by rabid horses, 9 were admitted within three months, but none developed hydrophobia, 1 died from erysipelas and 1 from septicæmia. Of 4 bitten by a rabid hog, none fell ill; there were 4 cases bitten by rabid men, 1 by a white bear, and 1 by a rabid squirrel. Thus, of the total number (396) bitten by rabid animals, 18 died, or 4.52 per cent. Dr. Drzewiecki maintains that Pasteurian inoculation does not prevent hydrophobia in man, and that M. Pasteur only proved that it prevents rabies in the dog, which, however, was not even borne out by the experiments of Frisch. The particulars of some of the fatal cases treated during last year at the Pasteur Institute are cited to support the contention of the inefficacy of the method; and the plea that severe cases of bites on the face or head cannot be successfully treated is held to show that the method is not truly anti-rabic. Again, if the inoculations modify the intensity of the virus, how is it that the symptoms exhibited by the fatal cases are so severe? The method, Dr. Drzewiecki thinks, may be of value to the veterinary surgeon, but applied to man "it is unscientific, and as such must be condemned in the interest of humanity and science."—*Lancet*.

How and When to Drink Water.

According to Dr. Leuf, when water is taken into the full or partly full stomach, it does not mingle with the food, as we are taught, but passes along quickly between the food and lesser curvature toward the pylorus, through which it passes into the intestines. The secretion of mucus by the lining membrane is constant, and during the night a considerable amount accumulates in the stomach; some of its liquid portion is absorbed, and that which remains is thick and tenacious. If food is taken into the stomach when in this condition it becomes coated with this mucus, and the secretion of the gastric juice and its action are delayed. These facts show the value of a goblet of water before breakfast. This washes out the tenacious mucus, and stimulates the gastric glands to secretion. In old and feeble persons water should not be taken cold, but it may be with great advantage taken warm or hot. This removal of the accumulated mucus from the stomach is probably one of the reasons why taking soup at the beginning of a meal has been found so beneficial.

Heart Failure.

"It would be an excellent idea," says the *Manchester Union*, "if physicians of the present day would invent some other reason for about all of the deaths which occur nowadays than the cheap fraud, 'heart failure.' This might not be of serious moment were it not for the fact that hundreds of people are being nearly frightened to death by the constant use of the cause for sudden deaths, and many people who are sick, and necessarily have some heart symptoms, are kept in constant terror by reading or hearing in other ways of death after death by heart failure. There are probably no more deaths from heart failure in these times than heretofore, but a new cause for death has been coined, and the nervous and timid are being severely injured by it." We would suggest that hereafter physicians use the term "cardiac asthenia," which has a learned sound and means just the same. The immediate cause of death in many diseases being, in fact, "heart failure," we do not see how otherwise the "nervous and timid" can be protected.

THE COCO DE MER—LODOICEA SEYCHELLARUM.

BY CHARLES D. BAKER.

On a map the Seychelles group of islands are represented by a dot not larger than a pin head, yet there are thirty of them, and one, Mahe, is eighteen miles long and from three to five miles broad. They lie nearly in the Indian Ocean and just south of the equator, 3° 40'–5° 35' S. lat. and 55° 15'–56° 0' E. long. These islands abound with interesting subjects to the student in natural science, but among them none is more wonderful or striking than that famous tree, the Coco de Mer. Nowhere else in the world can this tree be found except on the islands of this group. At one time Curieuse and Praslin were covered with the trees, but travelers who have recently visited the islands say that the vegetable wonder has vanished from the first, but is plentiful on the second. One of these explorers was Col. Nicholas Pike, for seven years United States

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consul at the island of Mauritius, which is nine hundred miles distant, and to which colony the Seychelles group belongs. In describing his impressions of the tree, he says: "The first appearance of the curious Coco de Mer is disappointing, and at a distance looks quite disreputable for so famous a tree. Imagine a tall thin stem towering up over a hundred feet, with a great ragged head of green and withered leaves. The impression is not favorable, a common cocoanut tree is handsomer. These, however, are the male trees; the females are rarely over 60 or 70 feet, and not being so high, are less exposed to the winds. When about twenty or twenty-five years old, before the stems begin to rise, it is certainly one of the loveliest productions of the vegetable world, and here it is seen in all its beauty."

The leaves of the Coco de Mer are winged and palmated, and when the stem is just rising above the ground, in favorable situations, they attain a length of fifteen feet exclusive of the petiole, which is of an equal length and 12 feet wide, but both diminish in size as the trunk increases in height. This is a necessity, as the tall thin stem could not support a head of such large leaves and the heavy fruit which the tree bears. Travelers often give the natives small sums of

money, for which they will climb the trees and swing upon the great leaves—a feat attended with much danger, considering the great height of the leaves from the ground.

Before the leaves unfold they are covered with a thick cottony substance, which is used for mattresses. When about thirty-five years old, the tree begins to blossom. After three years from fecundation, the fruit has attained its full size and is called *Coco tendre*. It can be cut with a knife in this stage, but gradually becomes hard and black, but it is seven or eight years from time of fecundation before it is ready to fall. The double nut, with the husk around it and when fully developed, is about the size of a bushel basket. The meat of the nut is agreeable eating, and tastes like the cream of charlotte russe. The shell of the nut is used by the natives for scoop buckets, and is put to a variety of other uses. These immense nuts used to be found floating in the Indian Ocean, and gave rise to any number of fabulous stories in regard to their origin. It was claimed by many that they grew in the sea, but this claim, of course, was easily refuted; but nevertheless, this peculiarity is kept in remembrance by the name which the tree bears, Coco de Mer, or cocoanut of the sea.

When the nut falls to the ground, the first act in the future tree's life is perhaps as wonderful as anything in its future history. It takes nine months after planting before the germ is ready to start, when it shoots out from the nut and creeps along the ground, drawing nutriment from the ground as it goes. When a distance of some twenty feet has been covered, it begins to shoot upward and to put forth leaves, each leaf requiring a year's elaboration in sun and air before the next appears. If the nut does not fall germ downward and meet the ground so as to draw substance from it, after an ineffectual struggle for some few feet on the surface all vitality is exhausted, and the vegetable baby dies from the heat of the sun and the lack of moisture. Another remarkable fact regarding the Coco de Mer is that it rests in a perforated bowl which in form resembles a colander. A great number of rootlets radiate from the trunk and run through the holes in the bowl and then extend into the earth, sometimes for thirty feet. When violent winds blow, as they frequently do in this region, the tree, being tall and slender, with a great bunch of very heavy leaves and nuts forming a great bouquet on its top, bends over until it seems as if it must fall, but rights itself again, its long roots seeming to act like elastics, which draw it back into position again.

On the island of Curieuse, where there are now no specimens of the Coco de Mer, many of the bowls in which the trees once rested are still found in perfect condition, showing the imperishable nature of the material of which they are composed.

The numerous uses to which the leaves of the Coco de Mer can be adapted has led to the wholesale destruction of trees. The Mahometans use them to weave into praying mats, and they regard them as having a special sanctity. These leaves are very beautiful in their unfurled state, their edges being of a delicate green and the laminae of a clear pale straw color. Beautiful fans, artificial flowers, hats, ladies' work baskets, and other articles are made from them.

The expanded leaves are also used for thatch, and when folded together and pinned with little skewers of bamboo will hold nearly a bushel of fruit. The petiole is used for palings and often for rafters, being strong and durable. The trunks are split and used for palisades and for boards for the ends of houses, and pieces are hollowed out and used for gutters. They are considered imperishable. It is the opinion of Col. Pike and other investigators that the Coco de Mer is a specimen of antediluvian flora.

The Boulak Museum, Cairo.

The magnificent collection of Egyptian antiquities at the Boulak Museum is now, it appears, in the greatest jeopardy, and, unless the European public raise their voices in protest, a scheme, which will probably prove the ruin of all the more perishable objects, will shortly be carried out. It has been decided by the Egyptian government to remove the collection from Boulak to the palace of Ghizeh.

The palace of Ghizeh is totally unfit for the purposes of a museum. It is one of the numerous palaces built by the Khedive Ismail in the heyday of his extravagance, and, though it must have cost a very large sum of money, it is already in a dilapidated condition. The roof was never properly finished, and admits the rain in every direction, the floors and walls are unsound, and quite incapable of supporting the weight of the collection and of visitors, the lath and plaster cornices and ceilings are cracked and falling to pieces, and no amount of money can render it a suitable building for the exhibition of the objects of art proposed to be placed in it.

Persons contemplating building will find it to their advantage to subscribe for the Architects and Builders Edition of the "Scientific American." \$2.50 a year. Single copies 25c.