

when the fruit of the tree of knowledge of good and evil is once tasted, we are bound to pursue investigation and critically to examine even the best gifts. The more minutely we examine the water supplied to this city, the less satisfied we are with it. It has long been a matter of observation amongst medical men that strangers coming to reside in the city for a few weeks are subject to diarrhoea with very depressing effects. This cannot be attributed to the climate nor wholly to the bad sewerage, but it is generally charged upon the Ottawa water. There is nothing in the analysis of the water by Dr. Sterry Hunt to account for any such peculiarity, at least so far as inorganic matter is concerned, and his analysis appears to have been directed to perfectly bright clear water, free from suspended matter and from organic life. Doubtless the water when passed through a charcoal filter is as clear, bright, and pure as any city need be blessed with. The water itself, therefore, is not the subject of animadversion.

It is the large amount of suspended matter, organic and inorganic—the debris alive and dead—slimy and slippery—the living inhabitants and the dead vegetation—to which the strongest exception should be taken.

On taking a thoughtful turn the other day around the Montreal Reservoir much more was observed than approved—the open character of the Reservoir is in itself objectionable. It should be roofed in with open sides. The public, moreover, can approach too near to it; and it is not sufficiently protected against the commission of those offences which are the subjects for penalties upon conviction.

The peaty character of the water is a matter of minor importance in a sanitary point of view, but this would be to a great extent removed by an efficient system of filtration.

The abundance of large fish reminded one of the fish pools of Heshbon, and we wondered whether Solomon was wise enough to reject such water as unfit for human consumption. Here they feed, fatten, flourish, and spawn from generation to generation. Would our aquarium-loving friends like to take a dip occasionally? and those who have tended the gold and silver fish globes and changed the water so frequently—would they choose to use it for table purposes after the fish had done with it?

Some philosophers indeed might claim that fish spawn, frog spawn, and snail spawn were but varieties of fresh eggs; but few would relish the notion of swallowing the excreta of all these animals, the exuvia from their skins, the organic remains of those who happen to die, and the thousand and one voracious scavengers ordained by nature to sweep away the field of death by making it their prey.

All these we drink and call it "a drink of water."

But while we may consider such matters upon reflection as "Noxious Food," a more serious feature yet remains. No more fearful death can be encountered by a man than to be "eaten up of worms till he dies." How many children and delicate females fall victims to these destroyers no human knowledge can estimate, and nothing short of post-mortem examinations in every case of death could disclose. The disturbance they cause to the general health so simulates usual functional derangement that the cause is often unsuspected, and where suspicions are aroused a refuge is sought in some of those "Worm Medicines," whose name is Legion, and which have obtained a prominence on this continent unknown in Europe. When we have such evidence before us as is shown in our illustration, there can be little hesitation in fastening the source of such diseases upon "the water we drink."

Dr. Cobbold has recently called the attention of the British Medical Officers of Health to the danger of the distribution of Cestoid worms by means of impure water, and he instances the recent introduction of a tape worm, new to Britain, and chiefly affecting beaves and graminivorous animals.

In a few months it spread into several counties in England, causing death among the cattle, greatly to the alarm of the graziers and to the beef-loving Englishmen.

Prof. Agassiz declares that all fish are infected with worms of one sort or another, and that you can only escape flesh worms by properly and thoroughly cooking your food.

This resource is not open to us on the water question unless we boil the water before we drink it, as it is certain that creatures thus infected are continually passing both worms and ova by the intestines, which render the water unsafe and unfit for human consumption.

The prodigious reproducing power of these worms; their tenacity of life so long as they can obtain food, and their migratory habits in flesh, render them a serious scourge to humanity. All the resources of Science should be directed against their invasion—and it is only by a fair admission of the strength of the enemy that we can be prepared to make an adequate defence against him.

The worms represented in our illustration, figs. 1 and

2, belong to the same order and family as the Trichina found in pork, and the Guinea worm, chiefly known in India. They are remarkable for what is called alternation of generation and migration. The parent is nourished and fecundates in the intestines of an animal, it produces numberless broods of minute microscopic worms which penetrate the flesh, and successive broods of these destroy muscular power, induce nervous exhaustion, and often penetrate important vital organs, causing functional derangement of the liver, kidneys, heart, or brain, as the case may be, and their diagnosis is most obscure.

No. 1. Filaris Fluvialis, has been taken by the writer from the water tap direct. A medical friend has one which caused great annoyance and pain to a patient who, for some weeks, declared that she had a "snake in her inside," and after the administration of an emetic, she vomited this Filaris, about nine inches long, quite alive, and remained so in water for several months. Small specimens have also been obtained from the writer's house filter. Similar worms have been taken swimming freely in the Ottawa river; one measured eleven inches in length. Another, about eight inches long, delivered after capture about thirty-six inches of a white filament, which proved, on microscopic examination, to be a string of minute eggs, closely packed together, and estimated at considerably over two millions in number.

A single worm, therefore, swallowed in this condition, would produce an immense swarm of young, capable of boring and penetrating the flesh in every direction.

The worm No. 2 is of the same family, and is closely allied to, if not identical with, the Guinea worm of India. This worm attains the diameter of a cedar pencil and a length of two feet; the young are microscopically small, and of the shape and character of those figured. They also migrate in the flesh in every direction.

No. 3 is a very active inhabitant in every aquarium, his movements are very uncomfortable in appearance, but we have no evidence that his progeny are of the penetrating character of the last named.

No. 4, Paramecium, and Rotifera, No. 7, are lively scavengers with enormous appetites like the polyps; they may be dried up again and again, and like very Rip Van Winkles, come to life again after a long snooze and are as busy as ever. They are probably digested in the acid juices of the stomach.

No. 5, the Diatomaceae, constituting the centre group, are chiefly composed of silica or sand. They are very active in their movements whilst in flowing water, but even in this water containing silicate of potassium, they subside in the filter and become an agglutinated mass of a somewhat indigestible character, to say the least of it.

No. 6, the Crustaceans below look very formidable—but are probably good eating—and digest as well as shrimps or prawns eaten whole. The Vorticella, No. 8, are also capable of easy digestion. The fungoid and confervoid growths, No. 9, are not so edible. These depend for soil on a low and changing condition of organic surface, and usually indicate a condition of decay. These are always associated with Fever, Cholera, and Diptheria.

The Household Filter constitutes a most valuable domestic utensil.

It not only frees the water from all these organic and inorganic impurities, but it also affords the best net for microscopic observation and research.

Here is the evil. Herein is the remedy. A public and complete system of filtration of the water is demanded, and the best mode of its accomplishment will be indicated in a future communication.

[The illustration we give on our first page is on the highest authority, being the result of the united observations of several members of the Montreal Microscopic Club, who have made an independent and joint examination of the water during the last few months; and from the pen and pencil of its secretary, Dr. J. B. Edwards. We have felt it to be our duty to lay these facts prominently before the public—not to deter any one from drinking the water, but to show that a necessity exists for a well devised plan for the purification and filtration of the water for the public at large. The intelligent and the wealthy have the power to protect themselves by the use of household filters, but the public have no such protection, and they should seek it, as entitled to it, at the hands of the authorities; for some system of filtration, such as is common in Great Britain and on the continent of Europe, is surely applicable here.—Ed. C. J. News.]

The Marquis of Hertford, whose death was announced a week or two ago in a cable despatch, was the fourth inheritor of that title, and was born in 1800. On the death of his father he inherited an immense fortune, which he largely devoted to the maintenance of a magnificent establishment in Paris, and the purchase of costly works of art. At the famous sale of the gallery of King William I. of Holland, he purchased one picture, the "Assumption," by Murillo, for the enormous sum of \$120,000. The Marquis was an early and constant friend of Napoleon III., and encouraged him in his candidature for the office of President. The vast estates and immense wealth of the Marquis descend, with the title, to his young kinsman, Capt. Hugh de Grey Seymour, his cousin's grandson.

## THE WHY AND THE WHEREFORE OF PECULIAR NAMES—MANNERS AND CUSTOMS NOT GENERALLY KNOWN.

BY THE REV. J. D. BORTHWICK.

(Continued.)

M.

**MACCABEES**—Derivation of: During the war between Antiochus the Mad, of Syria, and the Jews, Judas, son of Mattathias, determined to save his country, and with 6,000 men took the field. The standard which he raised on this eventful occasion, had inscribed upon it, *MI CAMO-CA BAALIM JEHOUAH* (who among the gods is like unto Thee, O Lord?) and from the initial letters of these words he and his successors were called the Maccabees.

**MANES**—The name applied by the ancients to the soul when separated from the body. Some say that the word comes from *manis*, an old Latin word for good or propitious. The Romans always superscribed their epitaphs with the letter D. M., Dis Manibus, to remind the sacrilegious and profane not to molest the tenements of the dead.

**MARINER'S COMPASS**—Discovered by Flavio de Gioja or Giovia, of Naples, A. D. 1392; Columbus first discovered the variations of the needle, A. D. 1492; and it was observed in London, A. D. 1580; Charles of Anjou being, at the time of its discovery, King of Sicily, the *flour de lis* was made the ornament of the northern radius of the compass in compliment to him.

**MARQUESS**—This dignity, called by the Saxons *Markin Vere*, and by the Germans *Margrave*, took its origin from *Mark* or *Mareh*, which, in the language of the northern nations, is a limit or bound. The first Marquess in England was Robert de Vere, Earl of Oxford, who was created Marquess of Dublin by Richard II., A. D. 1385.

**MASANIELLO**—The Fisherman King; he reigned for ten days, and being slain, was thrown into a ditch. *Masanella* is universally recognized as the name of the celebrated Neapolitan insurrectionist who, at one time, nearly overturned the government of that kingdom. How few who use the word are aware that "Mas-Aniello" is but a corruption of *Thomas Aniello*, so pronounced by his vulgar companions, and now raised to the dignity of an historical name?

**MAZEPPA**—Mazeppa was the son of a Polish gentleman, established in Podolia, and, by one of those fortunate circumstances which often exercise a great influence on human destiny, and also by his family connections, attracted the attention of John Kazimer, King of Poland, who spared no expense in giving him an excellent education and made him page at his court. The beauty, accomplishments, and enterprising spirit of the young page did not fail in making a deep impression on many a fair lady in fashionable circles. He was introduced to the wife of Martin Koutsky, grand general of artillery, and felt inspired at the first sight with a passion which, by frequent opportunities of seeing the beloved object, and the difficulty of gratifying its fancy, became every day stronger, more dangerous and daring. For a while the passion of the two lovers, by their mutual prudence and carefulness, was not known, and its secret gratifications added new charms to its existence. Such a thing, however, could not possibly be long concealed at a court where jealous and watchful eyes were constantly directed on both parties. A lady, whose advances Mazeppa received with coolness, soon discovered the true object of the latter's affections, and indignantly apprised the husband of the conduct of his beautiful and guilty spouse. Mazeppa, watched secretly, was caught by the enraged husband, who, indignant at the extent of his domestic misfortune, and excited by the thirst of revenge, ordered his man to scourge him unmercifully till he lost his consciousness, to pour a sort of salt liquid over his body, and cover it with tar. The young page was then tied, by cutting strings, to the back of a wild and indomitable Ukrainian horse, sought and prepared before hand for that purpose, and was thus left to his destiny. The horse, suddenly liberated after being tormented, and unable to shake the weight off his back, dashed at a furious speed into the desert of his native steppes. Hunted by wolves, as well as by some Cossacks, who thought it an apparition of an evil spirit, the horse traversed torrents, ravines, rivers, crossed the Dnieper, and galloped with incredible speed into a small town in the Eastern Ukraine, on the market day; and there, excited with hunger, fear and fatigue, fell dead. Mazeppa, restored to life, and hospitably taken care of by the Cossacks, adopted their manners and religion.

**MERINO**—So called because the cloth is now made from the wool of the Merino sheep, peculiar to Spain, it being against the laws of that country to export any of the sheep.

**MERRY ANDREW**—This name was first given to a droll and eccentric physician, who was called Andrew Borde, and lived in the reign of Henry VIII. He used to attend fairs and markets, and harangue the people, by whom he was called Merry Andrew, hence the name.

**MILLINER**—Milliner is a word corrupted, or at least altered from *Milaner*, which signified a person from Milan, in Italy. Certain fashions of female dress, that first prevailed in that city, were introduced by natives of it, into England, and hence arose the word milliner. It is very probable that the term was first used in a reproachful sense, because, previously to the arrival of the innovators from Italy, all the mysteries of female habiting had been in the hands of women—tire-women, as they were called, and men then, for the first time, became parties to the business. Milliner, originally, had a purely masculine signification, but now we apply the term generally to females, and distinguish those of the other sex who engage in the occupation, by the name of man-milliners.

**MONEY**—The word money originated in the fact that the first silver money coined in Rome—which was A. U. C. 482, was struck in the temple of *Juno Moneta*.

**MOORS**—So called because they came from Mauritania in the North of Africa, and passed from Abyla into Spain.

N

**NABOB**—The Nabob is derived from *nawab*, the plural of *nab*, a deputy or lieutenant; but in the popular language of India, from which the word is come to us, the plural is used for the singular. Sir T. Herbert, whose travels were published in 1674, spells the word *nabob*, and defines it, "a nobleman in the language of the Mogul's kingdom, which hath mixed up with it much of the Persian." The word, applied to a wealthy man returning from India, seventy-five years back was familiar enough.

Another origin of the word is as follows: