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BY

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That Autumnal Fever is the legitimate product of vegetable decomposition, has been the generally received opinion of the medical profession, from the days of the Italian physician Lancisi; up to this time. It is thought that during the decay of most vegetable substances, a peculiar poison, the physical and chemical qualities of which, have never been, nor in all probability, will ever be detected, is generated; and that this material what-ever it is, is the certain, and evident cause of the existence of Autumnal Fever. We must acknowledge that this theory is supported by very high authority, and at first sight appears reasonable: but in these later days when science is shedding her beautiful effulgence in our midst, we are now not content with prima facie evidence of such radically important facts, which surely demand of us to be based on the most profound philosophic research. Now if the cause which

does produce this disease, be the result of the putre-
-faction of vegetable substances, why do not the effluvia,
which emanate from decaying masses of cotton seed
and hay, exert at least some deleterious effect on the
human organism? having passed two thirds of our
life in malarious localities, we have never known
this to be the case. You will find in many parts
of the south and west, that farmers are careful
to have considerable quantities of spoiled shucks,
decayed vegetable matter from about the fences,
straw, leaves, and animal excrement col-
-lected in pens built for the purpose, which
when the process of decomposition may have
taken place, they are accustomed to convey
off and spread upon their fields, in order
to fertilize their soils. Now if this pestifer-
-ous poison is absolutely generated either by the
decay of vegetable or animal matter; why
are not sufficient quantities of it engendered

in these pens of manure, to produce the fever? I have personally assisted in its removal, and have never felt any evil consequences. Further if it does originate certainly from the decay of the products of vegetation; any process which at all favors the luxuriance of vegetable growth, evidently must proportionably increase the cause; as a greater amount of material will be in this way afforded. But the contrary is the fact, for every one knows that cultivation is destructive to the cause. Again if vegetable decomposition is unquestionably the actual cause of this fever, why does not the fever prevail most fearfully. When the greatest quantities of vegetables are undergoing decomposition? Yet we know that the fever most usually subsides, previous to the season of frost. From these "data" we are led to the repudiation of the old Theory, which though long lived must soon pass into oblivion.

"The truth is, that fever is generated by the action of a specific poison, the production of which is quite independent of either vegetable or animal decomposition. "The poison was originally called "Marsh Miasm", because it was the opinion that marshy grounds were essential to its existence. "The term Malaria, is now prepend, and is so restricted in its signification, as to imply, Cause of Autumnal Fever. It produces no fever beyond 47° N. Lat., and is bounded east and west by extensive chains of mountains, and is known to increase as we approach the Equator in North America. "We have as good opportunities as any people in the world, to investigate its phenomina, and determine upon its cause, "For it has been the scourge of our country for a great number of years. Very few people in the South, can boast of never having had an ague; and those few will prove to be the inhabitants of the older settled portions, of the

country. First impressions are difficult to eradicate. We are accustomed to believe a thing until we consider it a self evident fact, & are perfectly at rest in regard to it, though we have no right to any notion about it, having never made investigation ourselves. We have asserted that Malaria is not at all necessarily connected with the decay of vegetable or animal substances: and if we are unable to prove the fact, we will not urge its reception. We hold that if one case, of Autumnal Fever, was ever known to exist where there was no possible Chance, for it to have originated from the decomposition of vegetable or animal matter, that the single case, well established, should be most conclusive evidence to our minds, of the correctness of the assertion. Now the question is, did such a case ever happen? Undoubtedly, we find many inscribed on the records, of the eminently great Doctor William Ferguson. Were

we learn that in the year, One thousand eight hundred and nine, "Several regiments of the "British army" encamped in a hilly ravine, which had lately been a water course; puddles of pure sweet water, stood about in the excavated rocks: there was no vegetable growth there; for the soil was kept washed away by the "rolling torrents;" and we imagine that there were no animals there, as there was no vegetation for their subsistence. Yet Several of the soldiers were attacked with violent remittents during the single night. Let us note that this was at the close of a very dry and hot season. From well authenticated statements like these, we are led in our consideration of the cause of Malaria, necessarily to the truth, that soil has no part in its production, except as a mechanical agent. The idea of some that soil is necessary to its evolution,

is, I suppose, predicated of the accident, that Soils mostly impregnated with decayed vegetable matter, generally belong to malarious localities. But this is no reason why soil should have any thing to do in its production. One thing is not the cause of another, merely because it is found in its company; if this were so, Saturn would be the cause of his satellites; yet the God of hosts "spake into being." Doctor Wm. Ferguson, states that the soil at Walcheren, consists of one proportion of white sand, and a half a proportion of clay; and also that the soil of Rosendaal & Osterhout consists of those ingredients in the same proportions. Now we know that soils like those can not produce vegetation; Still the records of the historian bear testimony, that nearly all of the British army was destroyed while it was stationed at these several places: and that remittent fever was the instrument of destruction, which committed

such fearful ravages in their ranks. Again this happened at the close of a very dry and hot season; moisture was circulating a little beneath the surface. Now from a careful examination of facts like these, we are wonderfully relieved of the burthen of our "first impressions," and are led by imperceptible degrees, to the knowledge of the truth in regard to the cause of Malaria. Only two of the original elements, seem essential to generate this morbific and disastrous agent, about which there has been so much ill grounded speculation. "Heat and moisture. "The moisture must be situate a little way beneath the surface, and sufficient heat must play upon that surface; and where-ever a high enough degree of heat, and a great enough quantity of moisture can be found under these necessary conditions; Malaria will produce its specific effects, upon the inhabitants of that locality.

It matters very little what may contain the moisture, so that we find it bearing its necessary relation to heat; Where Malaria is produced we most commonly find it percolating beneath the surface of the earth, being restrained from sinking down, by a substratum of impermeable clay, or frequently by foundation rocks, which act altogether as mechanical hinderances. Carroll county in State of Georgia, consists chiefly of red & gray lands, the former being most abundant in those parts of the County, which suffer most with Malarial diseases. The lands about Villa Rica in the north eastern portion of said county, are so very porous that after the most tremendious showers of rain, they dry up in a very few hours, so that the ploughman can resume his duties. This is certainly the healthiest spot in the State, when the year is seasonable.

Twenty years ago, it began to be settled up, in consequence of the discovery of the gold mines, & a great number of pits were dug which have kept partly filled with water, a great part of the year ever since. Now so long as the water remains in these pits, we notice that no malaria manifests itself: but when heavy rains fall in the winter, and spring, & a parching dry Summer such as was, last year, succeeds. There is any amount of fever & dysentery, in the country. Rock is found not a great way beneath the top of the ground. Putnam co. in the eastern part of the State, was twenty years ago undoubtedly amongst the sickliest portions of the world, & it continued so for a number of years, & became quite free of Malaria. The lands were fertile & the low grounds, are yet rich, producing luxuriant Cotton growth.

But for the most part, the lands have been badly used & are now worn out. The citizens are no longer moveing off to find health, for the County seems to have been purged of Malaria in most sections. Now this is accounted for by the "Old fogy" doctrine, in this way, that while the country was new, vegetation was more abundant & therefore fever was more rife, & that fever has diminished the limits of its extension, in proportion to the age of the County. But we argue that when the land was fresh, that the depth from the top soil to the clay, was perhaps the most favorable distance, for the proper relation of heat & moisture in the production of Malaria: & that fever has diminished in proportion to the disturbance of this relation, in consequence of the washing away of the soil, which necessarily diminished that depth. We sometimes have fever in countries, of very

deep soil; in this case it requires a very dry & hot season: for if we increase the depth of the soil, a more severe & continued drought, must take place in order to raise the poison. The country about water courses, it is true, is often rich, and when it is overflown, great quantities of decaying vegetable matter are left upon the flats, exposed to the action of the sun. Now when there is a good enough resisting medium beneath the surface, and if this happen during the hot season, and within the necessary latitude and longitude, we will have the formation of Malaria, and would have had it, any how, if no vegetable substance had have been left on the surface. But if soil be light & porous and have no resisting substrata beneath, Malaria will not manifest itself. It is said that no Autumnal Fever is found in the "Piny Woods." We ask Why?

"For I know that the most productive land we ever saw in our State, is "Piny Woods." The Pine straw is very excellent manure, and is used in this way a great deal by scientific farmers of my acquaintance. Malaria is not often produced in these lands, because they are very generally of a light porous character, and have not the ability to retain moisture properly for its production: & not because there is no vegetable matter to decay. Some argue that here the decomposed matter also sinks as does the moisture: their own theory denies, that bodies after entire decomposition, are further capable of producing Malaria; And certainly complete decomposition must precede the absorption of such substances, by the earth. & Malaria must be evolved during decomposition, if such substances are capable of producing it. Most new countries are at first exempt from the dangers of Malaria, though

their soils may present one expanse of decomposed, and decomposeing leaves, grass, wild flowers, and other innumerable substances. But when the population increases, and they begin to kill the trees of the forest, which they do, by intermitting the circulation of their fluids, the destroyer comes, and desolates the land which but a short time before, was the haunt of health. The history of the early settlements in the west abundantly proves, this fact. People who settled, and enjoyed for a while the blessings of health, soon began to go back to their old homes, which in their turn had become healthy. Prairies are carpeted with vegetation, and are almost exempt from Malaria. Mill ponds when new, are productive of Malaria because the trees are deadened. Old ponds contain accumulations of vegetable matter, and are usually healthy.

3rd The Specific gravity of the poison under consideration, is much greater than that of common air.— Hence the reason, that it is confined to low grounds. Water has power to dissolve it, and therefore a rainy spell during the prevalence of Malarial fever, will check its progress. Malaria can not often originate in cities, though many are situated on large streams which annually overflow, throwing out much vegetable matter, ~~which~~ undergoes decomposition.— but the surface of the ground about cities is trodden and will not absorb moisture, or if it be absorbed the Sun's heat is obstructed, & the two can not be brought under the necessary conditions, for the evolution of Malaria.— 4th Finally, Malaria is a specific poison and is only capable of producing specific diseases,— which never degenerate into other diseases.—